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International Paper Petition Heard by SEC

Application For Order Declaring It Not To Be Holding Company Under Utility Act Made By I. P. & P. Co. Heard By Securities Exchange Commission — Firm Proposes Selection of Liquidating Independent Trustees.

WASHINGTON, D. C., February 6, 1939—The Securities and Exchange Commission held a hearing on Friday of last week on the application of the International Paper and Power Company for an order declaring it not to be a holding company under the Public Utility Holding Company Act, as a result of the proposal by which the company and its subsidiary, the International Paper Company, will divest themselves of their utility holdings by transferring all of their voting stock in International Hydro-Electric System to three independent liquidating trustees.

The witnesses included C. Brooks Stevens, textile manufacturer of Lowell, Mass., and Henry G. Wells of Haverhill, Mass., formerly a member of the Massachusetts Department of Utilities, two of the trustees. The purpose of their examination was to determine that there was no interlocking relation between them and International Paper and Power. Redfield Proctor, former Governor of Vermont, the third trustee, was not present, but George H. Brownwell, counsel for the applicant, read a statement to establish the complete independence of Mr. Proctor from the company.

Other witnesses were Irwin L. Moore, president of International Hydro-Electric; Coulter D. Young, who is secretary of International Paper and Power, International Paper and also of International Hydro-Electric, and E. B. Norcross, assistant treasurer of International Paper and Power, and International Paper, and treasurer of International Hydro-Electric.

The proposal is that Mr. Young and Mr. Norcross be permitted to retain their positions with International Hydro-Electric at the discretion of the liquidating trustees, because of the difficulties in a change at this time. Robert F. Krause conducted the examination of the witnesses for the SEC, and the hearing was before Richard Townsend, trial examiner. The hearing was adjourned subject to call, pending the personal appearance of Mr. Proctor.

The liquidating plan filed by the three trustees provided by transfer to them of 2,500,000 common shares, all of that issued and outstanding of Hydro-Electric and 3,000 capital shares of Olcott Falls Company from International Paper and Power and 1,000,000 class B shares or all of that outstanding of International Hydro and a promissory note of $900,000 of Olcott Falls Company from International Paper.

The trustees agreed to liquidate the securities as rapidly as possible and said that, holding the voting power, they would not authorize the election as directors of Hydro-Electric any person who is at any time a director, officer or employe of International Paper and Power or any of its subsidiaries.

Consumer's Box Board Co. Sold

The Gibbs-Brower Company, Inc., 21 East 40th street, New York, reports that it has sold for Senator H. J. Pierson of Lititz, Pa., the paper mill, of which he was formerly president and general manager, located in Lancaster, Pa., and known as the Consumer's Box Board and Paper Company, to E. P. Rose of Lontg Island, New York. The new company will be known as the Eden Paper Company. Mr. Rose will be president and his wife will be vice-president. The services of George W. Penniman will be retained as superintendent. The Eden Paper Company will run on the same grades as formerly.

To Serve On I. P. Liquidating Trust

The International Paper and Power Company reports that two Massachusetts men and a former Vermont Governor have agreed to act as trustees of the liquidating trust into which the company plans to transfer its utility holdings.

The three are: Redfield Proctor, of Proctor, Vt., C. Brooks Stevens, Lowell textile manufacturer, and Henry G. Wells, of Haverhill, former member of the Massachusetts department of public utilities.

Chapin & Gould Paper Co. Sold

A press dispatch from Springfield, Mass., under date of February 1 says that sale of Chapin & Gould Paper Company plant in Russell to Crescent Paper Corp., of this city was recorded in two deeds filed at the registry of deeds. The property, it has been announced, will be leased by E. I. du Pont de Nemours Corporation of Wilmington, Del., for use in the manufacture of imitation leather.

Preliminary Program For "Paper Week"

The American Paper and Pulp Association has just issued the preliminary program for its 62nd annual meeting. All meetings of the associations, together with the allied associations, will be held February 20-24 at the Waldorf-Astoria Hotel, with the exception of the Technical Association, which will meet at the Roosevelt Hotel.

The American Paper and Pulp Association will hold no dinner nor luncheon but the Paper and Twine Club will hold its annual banquet in the grand ballroom of the Waldorf-Astoria Hotel, Wednesday evening. The Salesmen's Association of the Pulp and Paper Industry will hold its annual luncheon in the grand ballroom of the Waldorf-Astoria Hotel on Tuesday and the Technical Association of the Pulp and Paper Industry will hold its annual luncheon on Thursday at the Roosevelt Hotel.

The preliminary schedule of meetings for Paper Week is as follows:

Monday, February 20

9:00 A.M. Sulphite Paper Manufacturers Association, Budget Committee. Crane U.
9:00 A.M. Sulphite Paper Manufacturers Association, Nominating Committee. Carpenter White.
9:30 A.M. American Paper and Pulp Association, Executive Committee. Carpenter Salon.
9:30 A.M. Blotting Paper Manufacturers Association, General Meeting. Le Perroquet W.
9:30 A.M. United States Pulp Producers Association, Executive Committee. Pillement GH.
9:30 A.M. Technical Ass'n. of Pulp and Paper Industry, General Session. Roosevelt Hotel.
10:00 A.M. American Waxed Paper Association, Annual Meeting. Jansen Suite.
10:00 A.M. Glazed and Fancy Paper Manufacturers Association, Annual Meeting, South Room, Commodore Hotel.
10:00 A.M. Groundwood Paper Manufacturers Association, Annual Meeting. Crane V.
10.00 A.M. The Tissue Association, Cost Men. R L.
10:00 A.M. The Tissue Association, Paper Towel Group. 4 M.
10:00 A.M. Writing Paper Manufacturers Association, Executive Committee. Palm Room.
10:30 A.M. Sulphite Paper Manufacturers Association, Board of Governors. Le Perroquet Y.
12:30 P.M. American Paper and Pulp Association, Executive Committee, Luncheon. Carpenter White.
12:30 P.M. Bristol Board Manufacturers Group, Executive Comm., Luncheon. Crane U.
12:30 P.M. Glazed and Fancy Paper Manufacturers Association, Luncheon. Hotel Commodore.
12:30 P.M. Paper Makers Advertising Association, Annual Meeting and Luncheon, Florentine Room, Hotel Lexington.
1:00 P.M. American Waxed Paper Association, Luncheon. Jansen Suite.
1:00 P.M. Groundwood Paper Manufacturers Association, Luncheon. Le Perroquet W.
1:00 P.M. Sulphite Paper Manufacturers Association, Annual Association Meeting and Luncheon. Le Perroquet X.
1:00 P.M. United States Pulp Producers Association, Executive Committee, Luncheon. Pillement F.
1:00 P.M. Writing Paper Manufacturers Association, Rag Content Executive Committee, Luncheon. Palm Room.
2:00 P.M. American Paper and Pulp Association, Executive Committee. Carpenter Salon.
2:00 P.M. The Tissue Association, General Meeting. 4 M.
2:00 P.M. United States Pulp Producers Association, Executive Committee. Pillement GH.
2:00 P.M. Technical Association of Pulp and Paper Industry, 3 Meetings: Container Session, Industrial Engineering Session, Forming and Finishing Session. Roosevelt Hotel.
2:30 P.M. Bristol Board Manufacturers Group, General Meeting. Le Perroquet Y.
2:30 P.M. Groundwood Paper Manufacturers Association, Annual Meeting. Crane V.
3:30 P.M. Sulphite Paper Manufacturers Association, Bleached Group. Le Perroquet W.
3:30 P.M. United States Pulp Producers Association, Annual Meeting. Pillement GH.
4:30 P.M. Salesmen's Association of the Paper Industry, Executive Committee and Advisory Board. Crane U.
5:00 P.M. The Tissue Association, Board of Governors. Pillement F.
5:30 P.M. Institute of Paper Chemistry, Board Meeting—Dinner. Hotel Barclay.
6:00 P.M. Sulphite Paper Manufacturers Association, M. G. Sulphite Group Meeting—Dinner. Pillement GH.

Tuesday, February 21

8:00 A.M. Sulphite Waxing Paper Group—Breakfast. Pillement F.
9:00 A.M. American Paper and Pulp Association, Waste Utilization Committee. Crane V.
9:30 A.M. Kraft Paper Association, Executive Committee. Jansen Suite.
9:30 A.M. Technical Association of Pulp and Paper Industry, 3 meetings: Alkaline Pulping and Materials of Construction Session; Acid Pulping Session, Coating Session. Roosevelt Hotel.
10:00 A.M. Cardboard Manufacturers Association, General Meeting. Pillement GH.
10:00 A.M. Salesmen's Association of Paper Industry, Annual Meeting. Le Perroquet Y.
10:00 A.M. Specialty Paper and Board Affiliates, Executive Committee. Crane U.
10:00 A.M. Sulphite Paper Manufacturers Association, Unbleached Group. Le Peroquet W.
10:30 A.M. Writing Paper Manufacturers Association, Annual Meeting. Palm Room.
11:00 A.M. Kraft Paper Association, Annual Meeting. Jansen Suite.
12:30 P.M. Salesmen's Association of Paper Industry, Annual Luncheon. Grand Ball Room.
1:00 P.M. Kraft Paper Association, Luncheon. Jansen Suite.
2:00 P.M. Cardboard Manufacturers Association, Group Meetings. Pillement GH.

2:00 P.M. Technical Association of Pulp and Paper Industry, 3 meetings: Alkaline Pulping Session; Coating Session; Water Session. Roosevelt Hotel.
2:30 P.M. American Paper and Pulp Association, Sanitary Committee. Crane V.
3:00 P.M. Specialty Paper and Board Affiliates, General Meeting. Le Perroquet Y.
3:00 P.M. Writing Paper Manufacturers Association, Rag Content Pa. Group. Palm Room.
3:30 P.M. Sulphite Paper Manufacturers Association, Manila Group. Le Perroquet W.
6:00 P.M. Glassine and Greaseproof Manufacturers Association, Executive Committee—Dinner Meeting. Pillement GH.

Wednesday, February 22

8:30 A.M. Writing Paper Manufacturers Association, Sulphite Bond Executive Committee—Breakfast. Carpenter White.
9:30 A.M. Technical Association of Pulp and Paper Industry, 2 meetings: Paper Testing Session; Preparation of Non-Fibrous Materials. Roosevelt Hotel.
10:00 A.M. Association of Newsprint Manufacturers of the U. S. Le Perroquet W.
10:00 A.M. Blotting Paper Manufacturers Association, General Meeting Crane V.
10:00 A.M. Glassine and Greaseproof Manufacturers Association, Annual Meeting. Pillement GH.
10:00 A.M. Specialty Paper and Board Affiliates, Bogus Bristol Group. Le Perroquet Y.
10:30 A.M. Writing Paper Manufacturers Association, Sulphite Bond Group. Jansen Suite.
1:00 P.M. Glassine and Greaseproof Manufacturers Association, Luncheon Meeting. Pillement F.
2:00 P.M. Technical Association of Pulp and Paper Industry, 2 meetings: Stuff Preparation Session; Graphic Arts. Roosevelt Hotel.
2:30 P.M. American Paper and Pulp Association—Open Meeting. Astor Gallery.
4:30 P.M. Writing Paper Manufacturers Association, Colored School Committee. Crane V.
6:00 P.M. Sulphite Paper Manufacturers Association, Treated Butchers Group—Dinner Meeting. Pillement GH.

Thursday, February 23

8:00 A.M. Sulphite Waxing Group — Breakfast. Pillement F.
9:30 A.M. Technical Association of Pulp and Paper Industry, 2 meetings: Testing Session; Heat and Power Session. Roosevelt Hotel.
10:00 A.M. Gummed Industries Association, Annual Industry Meeting. Le Perroquet Y.
10:00 A.M. Specialty Paper and Board Affiliates, File Folder Group. Crane V.
10:00 A.M. Writing Paper Manufacturers Association, Cover Paper Group. Carpenter Salon.
12:30 P.M. Gummed Industries Association, Luncheon. Le Perroquet W.
1:00 P.M. Technical Association of Pulp and Paper Industry, Annual Luncheon. Roosevelt Hotel.
1:00 P.M. Writing Paper Manufacturers Association, Thin Paper Group—Luncheon. Carpenter White.
2:00 P.M. Glassine Bag Association. Crane U.
2:00 P.M. Specialty Paper and Board Affiliates, Wood Specialties Group. Crane V.
3:00 P.M. Writing Paper Manufacturers Association, Manifold Group. Carpenter Salon.
3:30 P.M. Sulphite Paper Manufacturers Association, Bleached Kraft Group. Le Perroquet Y.
4:00 P.M. Window Face Bag Association. Crane U.

Friday, February 24

9:30 A.M. American Pulpwood Association, Annual General Meeting (followed by a meeting of the new Board of Directors). Jansen Suite.
1:30 P.M. American Pulpwood Association—Luncheon. Jansen Suite.

Salesmen's Association Luncheon

The annual luncheon of the Salesmen's Association of the Paper Industry will be held this year at the Waldorf-Astoria Hotel, New York, on Tuesday, February 21. A record attendance is anticipated and arrangements have been made with the hotel to seat up to 1,000 people in the Grand ball room.

Members are invited to bring as many guests as they desire. It is especially requested that the executives of companies be present, and members will find all their friends in the paper industry in attendance.

Dr. Neil Carothers, dean of the College of Business Administration of Lehigh University and a well-known economist, lecturer and writer on economic subjects, will deliver the main address. He will discuss some of the political, financial and economic problems which industry is facing today.

There will also be messages of welcome and interest from several of the leaders of the paper industry, and singing led by our song birds.

All those planning to attend this luncheon are requested to send in their reservations for tickets immediately to Dr. E. O. Merchant, Secretary, 122 East 42nd street, New York. It is planned to have the programme completed by 2:30 P. M., and all are urged to be on hand with their guests not later than 12:30.

Meetings of Tissue Association

The board of governors of the Tissue Association will meet at the Waldorf-Astoria Hotel all day February 17. The Tissue Industry, the Roll Toilet Group, The Tissue cost men, the Interfold Group and the Wrapping Tissue Group will meet at the Waldorf-Astoria, February 18. The Napkin Group, The Tissue cost men, the Waxing Tissue men and the Jumbo Roll Group will meet at the Waldorf-Astoria, February 19.

Coal Handling Equipment

Bulletin No. 331 just issued by the Chain Belt Company, Milwaukee, Wis., describes the company's "Rex" coal and ash handling equipment. Typical applications and installations are included. It is stated that the Rex systems are applicable to small or medium-sized plants requiring up to 150 tons of coal per day and up to 3,000 tons total storage.

TAPPI Annual Meeting Program

Roosevelt Hotel, New York, February 20-23, 1939

Monday, February 20

9:30 A.M. GENERAL SESSION (Ball Room)
F. C. Clark, Chairman

Secretary's Report
President's Address
Joint Textbook Committee Report
Business Meeting, Tellers Committee Report

The Fundamentals of Instrumentation, by J. A. Van den Akker, Institute of Paper Chemistry, Appleton, Wis.

Alsifilm, by E. A. Hauser, Massachusetts Institute of Technology, Cambridge, Mass.

Existence and Nature of Fibre Membranes, by H. F. Lewis and F. E. Brauns, Institute of Paper Chemistry, Appleton, Wis.

2:00 P.M. CONTAINER SESSION (Assembly Foyer)
J. D. Malcolmson and A. W. Nickerson, Chairmen

1. *Adhesives for Corrugating,* by J. V. Bauer, Stein-Hall Manufacturing Company, New York, N. Y.
2. *Sanitary Quality of Fabricated Paper,* by J. R. Sanborn, New York. Agricultural Experiment Station, Geneva, N. Y.
3. *Creasing and Bending of Folding Boxboard,* by J. F. Halladay and R. W. K. Ulm, Container Corporation of America, Manayunk, Pa.
4. *Puncture Testing of Boxboard,* by R. L. Beach, General Electric Company, Schenectady, N. Y.
5. (By title) *An Aging Test for Envelope Adhesives,* by J. Rex Adams, Old Colony Envelope Company, Westfield, Mass.

2:00 P.M. INDUSTRIAL ENGINEERING SESSION (Small Banquet Room)
L. T. Stevenson and B. M. Thomas, Chairmen

1. *The Human Factors in the Paper Industry,* by Guy Arthur, The Chas, E. Bedaux Company, New York, N. Y.
2. *The Use of Costs in Mill Operation,* by J. P. Hagenauer, Consultant, New York, N. Y.
   Production Control Symposium.
3. *Budgeting Demand for the Purpose of Controlling Production,* by L. T. Stevenson, New York, N. Y.
4. *Scheduling Paper Mill Operations,* by C. F. Moreau, American Tissue Mills, Holyoke, Mass.
5. *Standards in Their Relation to Production Control,* by S. E. Thompson, Thompson and Lichtner, Boston, Mass.

2:00 P.M. FORMING AND FINISHING SESSION (Ball Room)
E. P. Ingalls and G. Lamont Bidwell Jr., Chairmen

1. *Book and Bond Papers from Southern Black Gum,* by Charles Carpenter and G. A. Ritter, Herty Foundation Laboratory, Savannah, Ga.
2. *The Novak Wet Webb Process,* by C. R. H. Johnson, Raybestos-Manhattan Inc., Manchester, Conn.
3. *Cylinder Machine Head Boxes,* by P. H. Goldsmith, Pusey & Jones Corporation, Wilmington, Del.
4. *The Relation of Hydration to the Rate of Drying of Paper Sheets,* by J. G. L. Caulfield, L. C. Jenness and H. G. Macklem, University of Maine, Orono, Me.
5. (By title) *The Papermaking Properties of Holocellulose,* by H. H. Houtz and E. F. Kurth, Institute of Paper Chemistry, Appleton, Wis.
6. (By title) *Investigation of Anti-tarnish Paper,* by H. W. Rowe and Otto Kress, Institute of Paper Chemistry, Appleton, Wis.

NOTE: Papers presented by title are published but not read at the meeting unless the author is present and time permits.

Tuesday, February 21

9:30 A.M. ALKALINE PULPING AND MATERIALS OF CONSTRUCTION SESSION (Small Banquet Room)
Paul Hodges and J. A. Lee, Chairmen

1. *Survey of Process Construction Materials,* by TAPPI Materials of Construction Committee, J. A. Lee, Chairman.
2. (By title) *Corrosion and Protective Coating,* by L. G. Vande Bogart, Crane Co., Chicago, Ill.
3. (By title) *Stainless Steel for Pulp and Paper Mill Equipment,* by J. H. Faunce, American Rolling Mill Company, Middletown, Ohio.
4. *The Desirable Moisture and Alkali Content of the Sludge Discharged into the Recovery Kiln,* by M. B. Mount, Consulting Engineer, Lynchburg, Va.

NOTE: This meeting will be continued in the afternoon session. Any part of the morning program not completed will be continued in the afternoon.

9:30 A.M. ACID PULPING SESSION (Ballroom)
R. N. Miller and V. P. Edwardes, Chairmen

1. *Factors Affecting the Free Discharge of Stock from Sulphite Digesters,* by W. H. Kraske, Anglo-Newfoundland Development Company, Grand Falls, Nfld.
2. *Chipper Operation in Sulphite Mills,* by V. P. Edwardes, International Paper Company, Palmer, N. Y.
3. *Experiences With Forced Circulation and Indirect Heating of Digesters,* by D. C. Porter, Kimberly-Clark Corporation, Neenah, Wis.
4. *Controls of the Indirect Method of Sulphite Pulping,* by A. H. Stanton, Mason-Neilan Regulator Company, Boston, Mass.
5. *Problems in Sulphite Acid Making Introduced by the Use of the Chip Packer,* by E. Lamb, Oxford Paper Company, Rumford, Me.
6. *Indirect Digester Heating Survey,* by Pell Foster, Jr., Foster-Wheeler Corporation, New York, N. Y.
7. (By title) *A Study of the Physical Characteristics of Sulphite Pitch,* by R. O. Ragen and Otto Kress, Institute of Paper Chemistry, Appleton, Wis.
8. (By title) *A New Method for the Determination of the Organic Matter in Acid and Alkaline*

Cooking Liquors, by Herbert Prelinger, Crown Zellerbach Corporation, Camas, Wash.

9. (By title) *Discoloration of Swamp Black Gum Pulpwood in Storage,* by E. R. Schafer, J. C. Peer and M. Y. Pillow, Forest Products Laboratory, Madison, Wis.

9:30 A.M. COATING SESSION (Assembly Foyer)
F. W. Egan, Chairman

1. *Pliolite, A Coating Material for Paper,* by H. R. Thies, Research and New Products Dept. The Goodyear Tire and Rubber Company, Akron, Ohio.
2. *Thermoplastic Coatings—A New Approach to Decorative Paper,* by J. H. Long, Synthetics Dept., Hercules Powder Company, Wilmington, Del.
3. *Dry Coating,* by J. C. Pullman, Bert C. Miller Inc., New York, N. Y.
4. *Vinylite Paper Coating,* by A. K. Doolittle, Carbon and Carbide Chemicals Corporation, S. Charleston, W. Va.

NOTE: This meeting will be continued in the afternoon session. Any part of the morning program not completed will be continued in the afternoon.

2:00 P.M. ALKALINE PULPING SESSION (Small Banquet Room)
Paul Hodges and W. F. Gillespie, Chairmen

1. *Chemical Stack Losses and Their Recovery in the Soda Process,* by R. P. Whitney, M. I. T. Chemical Engineering Practice School, Eastern Mfg. Company, Bangor, Me.
2. *A Study of the Odors Generated in the Manufacture of Kraft Pulp,* by H. C. Dudley and J. M. Dallavalle, National Institute of Health, Treasury Department, Washington, D. C.
3. *Sulphidity Effects in the Sulphate Pulping of Douglas Fir,* by M. W. Bray, J. S. Martin and S. L. Schwartz, Forest Products Laboratory, Madison, Wis.

2:00 P.M. COATING SESSION (Assembly Foyer)
F. W. Egan, Chairman

1. *Developments in Coating and Drying Paper,* by H. G. Rappolt, J. O. Ross Engineering Corporation, New York, N. Y.
2. *The Use of Paper in the Plastics Industry,* by Harry Carlson, Bakelite Corporation, Bound Brook, N. J.
3. *Machine Coating Processes,* by P. J. Massey, Combined Locks Paper Company, Combined Locks, Wis.
4. *The Ortho Krome Process,* by A. B. Hurley, Hurley Screen Company, New York, N. Y.
5. (By title) *An Englishman's Impression of the Manufacture of Coated Paper in America,* by Frank Huckle, John Dickinson Company, Ltd., Home Park Mills, King's Langley, Herts, England.

2:00 P.M. WATER SESSION (Ballroom)
C. M. Baker and L. B. Miller, Chairmen

1. *A More Rational Method of Stating Hydrogen-Ion Concentration,* by L. M. Booth (deceased), Read by E. T. Wherry, University of Pennsylvania.
2. *The Operation of the Adka Saveall,* by E. N. Poor, W. C. Hamilton & Sons, Miquon, Pa.
3. *The Operation of the Sveen-Pederson Saveall,* by W. D. Harrison, Riegel Paper Corporation, Riegelsville, N. J.
4. *The Fundamental Chemistry of Alum and Its Application to Paper Manufacture,* by L. B. Miller, Keasby and Mattison Company, Ambler, Pa.
5. *Modern Concepts of Stream Pollution from Paper Mill Wastes,* by C. L. Siebert, Pennsylvania Department of Health, Harrisburg, Pa.

Wednesday, February 22

9:30 A.M. PAPER TESTING SESSION (Ball Room)
B. W. Scribner, Chairman

1. *The Determination of Resistance to Wetting of Paper and Paper Board,* by P. W. Codwise, Beaver Wood Fibre Company, Thorold, Ont., Chairman, Water Resistance Subcommittee.
2. *Progress Report on a Method for Determining Water Vapor Permeability of Sheet Materials,* by G. J. Brabender, Marathon Paper Mills Company, Rothschild, Wis., Chairman, Water Vapor Permeability Subcommittee.
3. *Comparative Resistance to Vapor Transmission,* by Melburn Heinig, L. W. Teesdale and C. E. Curran, Forest Products Laboratory, Madison, Wis.
4. *The Determination of pH Values of Papers,* by H. F. Launer, National Bureau of Standards, Washington, D. C.
5. (By title) *Weight Factors of Beaten Pulps,* by J. H. Graff, Institute of Paper Chemistry, Appleton, Wis.
6. (By title) *Fiber Dimensions,* by J. H. Graff and R. W. Miller, Institute of Paper Chemistry, Appleton, Wis.

9:30 A.M. PREPARATION OF NON-FIBROUS MATERIALS (Assembly Foyer)
H. C. Schwalbe, Chairman

1. *Factors Affecting the Brightness of Lined Boards,* by W. R. Willets, Titanium Pigment Company, New York, N. Y.
2. *Glycerine in Paper Manufacture,* by Miss Georgia Leffingwell, Glycerine Manufacturers Association, New York, N. Y.
3. *New Surface Active Chemicals,* by B. G. Wilkes and H. F. Robertson, Mellon Institute, Pittsburgh, Pa.
4. *Elimination of Pitch Troubles in Pulp and Paper Mills,* by J. H. Fritz, National Oil Products Company, Harrison, N. J.
5. *Handling Liquid Chlorine,* by M. W. Phelps, Solvay Sales Corporation, Syracuse, N. Y.

2:00 P.M. STUFF PREPARATION SESSION (Ball Room)
W. D. Harrison and G. Lamont Bidwell, Jr., Chairmen.

1. *Speculations on Power Requirements and Some Fundamental Aspects of Refining,* by A. S. Cosler, Bauer Bros. Machine Company, Springfield, Ohio.
2. *Water Retention of Beaten and Gelatinized Pulp,* by Arthur Sedoff, C. F. Holmberg, and E. C. Jahn, N. Y. S. College of Forestry, Syracuse, N. Y.
3. *Turbulence in Disc Refiners,* by D. Manson Sutherland, Trenton, N. J.
4. *Construction and Operation of the Noblewood Mill,* by James Coghill, Noble & Wood Machine Company, Hoosick Falls, N. Y.
5. *The Operation of the Noblewood Mill on Pulp Screenings,* by N. S. Grant, Great Lakes Paper. Company, Port Arthur, Ont.
6. *Frequent Errors in Stuff Preparation,* by A. B. Green, Consulting Engineer, Needham, Mass.

2:00 P.M. GRAPHIC ARTS SESSION (Assembly Foyer)

J. F. Halladay and A. W. Nickerson, Chairmen

1. *Photoengraving and Paper,* by Louis Flader, American Photo Engravers Association, Chicago, Ill.
2. *The Preservation of Records,* by A. E. Kimberly, The National Archives, Washington, D. C.
3. *The Use of Waxes and Case Testing Inks in Testing Printing Papers,* by W. A. Kirkpatrick, Allied Paper Mills, Kalamazoo, Mich.
4. *The Printability of Paper,* by G. L. Larocque, Rolland Paper Company, St. Jerome, P. Q.
5. *Paper Quality in Relation to Printing,* by R. H. Simmons, U. S. Government Printing Office, Washington, D. C.

Thursday, February 23

9:30 A.M. TESTING SESSION (Assembly Foyer)

H. W. Morgan, J. L. Parsons and F. W. Brainerd, Chairmen

1. *The Properties of Wet Fiber Mats: Correlation of Recovery from Compressive Deformation with Certain Sheet Properties,* by C. O. Seborg, F. A. Simmonds and P. K. Baird, Forest Products Laboratory, Madison, Wis.
2. *A New Fiber Classifier and Its Applications,* by F. W. Brainerd, Scott Paper Company, Chester, Pa.
3. *The Comparative Influence of Acids and other Electrolytes on Freeness,* by S. R. Adams, F. A. Simmonds and P. K. Baird, Forest Products Laboratory, Madison, Wis.
4. (By title) *A Digest of Abstracts of the Literature of Freeness,* by C. R. Cousins, Joseph Goldin and D. S. Davis, Wayne University, Detroit, Mich.
5. *The Economics of Color—Technical, Accounting and Papermaking Viewpoints,* by L. C. Lewis, Cambridge, Mass.
6. *A Photronic Brightness Tester, Opacimeter and Gloss Meter,* by S. W. Blanchard, Mead Corporation, Leominster, Mass.
7. (By title) *An Investigation of the Fundamental Scattering and Absorption Coefficients of Dyed Handsheets,* by W. L. Foote, Institute of Paper Chemistry, Appleton, Wis.
8. (By title) *The Fundamentals of Glassine Transparency,* by D. B. Wicker, North Caroline State College of Agriculture and Engineering, Raleigh, N. C.

9:30 A.M. HEAT AND POWER SESSION (Hendrick Hudson Room)

A. E. Montgomery and W. G. MacNaughton, Chairmen

1. *Study of Friction Between Solid Surfaces and Moving Paper Stock Suspensions,* by J. A. Van den Akker and P. C. Baldwin, Institute of Paper Chemistry, Appleton, Wis.
2. *Anti-Friction Bearings for Paper Machinery,* by R. H. De Mott, SKF Industries, Inc., Philadelphia, Pa.
3. *Factors Affecting the Construction of Mills in the South,* by D. G. Moon, Consulting Engineer, Savannah, Ga.
4. *Drying Rates for Paperboards,* by the TAPPI Heat and Power Committee.
5. *Drying Rates for Book and Printing Papers,* by the TAPPI Heat and Power Committee.
6. *Superheated Water for Paper Mills,* by J. F. Gschwind, J. O. Ross Engineering Corporation, New York, N. Y.
7. (By title) *Theoretical Analysis of the Cross Flow Heat Type Interchanger (Briner Economizer),* by E. Cowan, Lake St. John Paper Company, Dolbeau, P. Q. and B. Cowan, Price Brothers & Company, Ltd., Kenogami, P. Q.
8. (By title) *Drives for High Speed Supercalender and Winder,* by D. R. Shoults, General Electric Company, Schenectady, N. Y.
9. (By title) *Survey of Recent Paper Mill Steam and Power Generating Unit Installations,* by R. R. Baker, Westinghouse Electric & Mfg. Company, E. Pittsburgh, Pa.

NOTE: If this program is not completed by 1:00 P.M. it will be resumed immediately following the luncheon.

1:00 P.M. ANNUAL LUNCHEON (Ball Room)

F. C. Clark, Chairman

1. Address by L. A. Hawkins, Executive Engineer, General Electric Company, Schenectady, N. Y. *Invention, the Mother of Necessity.*
2. Medal Presentation to J. Newell Stephenson, Editor, Pulp and Paper Magazine of Canada, Gardenvale, P. Q., by George Carruthers, President, Interlake Tissue Mills, Merritton, Ont., and Chairman, Joint Textbook Committee.

F. A. Augsbury Reelected President

OGDENSBURG, N. Y., February 6, 1939—The annual meeting of the Algonquin Paper Corporation was held here last week at which Frank A. Augsbury was elected president. Willard S. Augsbury was reelected vice president and H. C. Howes was chosen secretary and treasurer. The plant is now operating 24 hours daily and recently it was announced that enough orders were on hand to insure the continuation of the day and night schedules throughout 1939. Mr. Augsbury was not in the best of health during the past year but his condition has improved to such an extent that he plans to continue his daily duties. The appointment of Wayne M. Lowe as his executive assistant was recently announced and he has assumed his new duties.

To Hold Hearing on Wages March 28

WASHINGTON, D. C., February 8, 1939—The Public Contracts Board which operates under the Walsh-Healey Act will hold a hearing here on March 28 in connection with wages in the paper and pulp industry. Any wages which may be set for the industry will be for those entering into government contracts only. The date is subject to change. What is called a panel meeting was held here a few weeks ago at which time representatives of the industry discussed wages in executive session.

Maine TAPPImen to Meet

The University of Maine graduates who are connected with the pulp and paper industry will hold a luncheon at the Roosevelt Hotel, New York, N. Y., on Wednesday, February 22nd at 1:00 P. M. A report will be given about the new chemical engineering and pulp and paper laboratory at Orono and the new officers of the group will be elected. Reservations should be made with George D. Bearce, Maine Seaboard Paper Company, Bucksport, Me.

Preliminary Program for Convention of National Paper Trade Association

Waldorf-Astoria Hotel, February 19-23, 1939

Sunday, February 19

10:00 A.M. Executive Committee.

Monday, February 20

10:00 A.M. Fine Paper Division Meeting, Vice-President P. W. Lesh presiding. Presentation and discussion of annual survey.

10:00 A.M. Wrapping Paper Committee Meeting, R. W. Miller, Chairman. Open session to be followed by executive meeting of the Committee.

12:30 P.M. Survey Committee Luncheon.

2:00 P.M. Opening Session; President G. G. Cobean presiding; Open to manufacturers and guests.

4:30 P.M. Twine Committee, T. Floyd Smith, Chairman.

4:30 P.M. Box Paper Committee, Wm. Schild, Chairman.

Tuesday, February 21

8:30 A.M. Wrapping Paper Merchandising Committee, S. E. Brown, Chairman.

9:00 A.M. Specialties Committee, J. N. Freedman, Chairman.

10:00 A.M. Fine Paper Meeting on Book Paper Distribution; B. E. Reeves, Chairman; Open session followed by executive meeting of the committee.

11:00 A.M. Bag Committee; Ed Wesselmann, Chairman; Open session followed by executive meeting of the committee.

2:00 P.M. Fine Paper Meeting on Writing Paper Distribution; P. A. Stuhlreyer, Chairman; Open session followed by executive meeting of the committee.

2:00 P.M. Committee on Tissue and Allied Products; R. M. Stone, Chairman.

4:00 P.M. Gummed Tape Committee; C. H. Schorske, Chairman.

5:00 P.M. Governing Committee—Fine Paper Division; Election of representatives to Executive Committee.

5:00 P.M. Governing Committee—Wrapping Paper Division; Election of representatives to Executive Committee.

8:30 P.M. Board of Directors; President G. G. Cobean presiding.

Wednesday, February 22

10:00 A.M. Fine Paper Meeting; Vice-President P. W. Lesh presiding; Trade Customs, Financial Practices and miscellaneous business.

2:00 P.M. Wrapping Paper Meeting; Vice-President F. T. Jamison presiding; Exhibits closed during this session.

4:30 P.M. Conference of Local Secretaries and Executives with National Counsel.

Thursday, February 23

10:00 A.M. Annual Meeting—N.P.T.A.; President G. G. Cobean presiding.

List of Exhibitors

The following concerns will make exhibits during the convention of the National Paper Trade Association at the Waldorf-Astoria Hotel, February 20-23:—

	Room Nos.
Allied Paper Bag Corp.	993, 994 & 995
The American Paper Goods Co.	976 & 978
A. W. Archer Co. Inc.	927
Baldwin Laboratories, Inc.	965
Bay West Paper Co.	9-R, 9-S & 9-T
Better Packages Inc.	908
Alfred Bleyer & Co.	987
Boston Drinking Cup Co.	9-C
The Brown Bridge Mills Inc.	9-U & 9-V
Brown Company	980, 982, 984 & 986
Central Paper Co., Inc. (Muskegon)	963
Central Paper Co. (Menasha)	902 & 904
Dennison Manufacturing Co.	951, 953, 955 & 957
Dixie-Vortex Co.	9-L, 9-M & 9-P
Erving Paper Mills	938
Robert Gair Co., Inc.	945
Gaylord Container Corp.	990 & 992
The General Cellulose Co. Inc.	961
Gilson Bros. Inc.	9-K
John M. Hart Co. Inc.	942 & 944
Hinde & Dauch Paper Co.	905
Hoberg Paper Mills	967 & 969
Hy-Sil Manufacturing Co.	974
Lily-Tulip Cup Corp.	979, 981, 983 & 985
Loroco Industries Inc.	900
Ludlow Manufacturing & Sales Co.	959
Mazer Paper Mills	941 & 943
McLaurin-Jones Co.	9-G & 9-H
Mono Service Co.	934
North American Pulp & Paper Co.	906
Oneida Paper Products	947 & 949
Orchard Paper Co.	901 & 903
Oval Wood Dish Corp.	935 & 937
Pejepscot Paper Co.	909 & 911
The Racquette River Paper Co.	915 & 917
Reed Tissues Corp.	939
Rexford Paper Co.	928 & 930
Riegel Paper Corp.	988
Royal Paper Corp.	977
Ruthford Machinery Co., Div. of General Printing Ink Corp.	9-A
Schorsch & Co. Inc.	9-E & 9-F
Sherman Paper Products Corp.	968 & 970
Stone & Forsyth Co.	936
Stone Straw Corp.	9-Y
Sutherland Paper Co.	914 & 916

Towlsaver Inc.....9-J
C. E. Twombly Co.....925
Union Bag & Paper Corp.....965
Universal Paper Products Co....931 & 933
Van Riper Schmitt & Co.....910
The Victoria Paper Mills Co.....972
Voorhis-Tiebout Co. Inc.....9-W
Wheeler Paper Corp.....975
White-Washburne Co. Inc.....971 & 973
Wolf Brothers.....907

Some of the Firms Which Will be Represented in New York Paper Week

The following is a list of some of the concerns which will be represented at the various conventions during Paper Week and the hotels, as far as it has been possible to obtain them, at which the representatives of these concerns may be reached.

Aetna Paper Company, Dayton, Ohio—J. C. Doty.

Aldine Paper Company, New York City—H. E. Gould, J. Singer, A. Schell and I. Klukoff.

American Coating Mills, Inc., Elkhart, Ind.—R. L. Snideman and J. C. Hendricks.

American Writing Paper Corporation, Holyoke, Mass.—Leon Yoerg, Russell S. Madden, W. J. Norton, R. D. W. Ewing, C. H. Cooley, J. H. Sweet, Miss H. U. Kiely, F. W. Hastings, F. A. Curtis, W. G. Russell, Andrew Jackson, E C. Reid, W. H. Shine, Harold Greason, J. G. McNaught. Waldorf-Astoria.

Beckett Paper Company, Hamilton, Ohio—Guy H. Beckett and Orin R. Summerville. Waldorf-Astoria.

Bedford Pulp and Paper Company, Big Island, Va.—Milton E. Marcuse and Alfred J. Kirsh.

Beveridge Paper Company, Indianapolis, Ind.—W. J. Blackley. Waldorf-Astoria.

Beveridge Paper Company, Indianapolis, Ind.—S. B. Sutphin. Barclay Hotel.

L. L. Brown Paper Company, Adams, Mass.—A. Millard Daniels.

L. L. Brown Paper Company, Adams, Mass.—E. E. Keough. Waldorf-Astoria.

Capital Paper Company, Inc., New York City—Abraham S. Meisel and Julius J. Meisel.

Caskie Paper Company, Inc., Lynchburg, Va.—G. E. Caskie, Jr., F. K. Williams and John S. Caskie. Waldorf-Astoria.

Central Fibre Products Company, Inc., Chicago, Ill.—Chas. E. Carey and Thos. E. Morriss.

Central Ohio Paper Company, Columbus, Ohio—Albert M. Miller, Roland W. Miller and A. F. Miller.

Chemical Paper Mfg. Company, Holyoke, Mass.—J. E. Holmes, L. H. Hulett, E. S. Dunbar, R. H. Morrill, J. W. Dudley and W. Diller.

Claremont Paper Company, Inc., Claremont, N. H.—G. M. Wetmore, W. T. Libby and H. B. Brinig.

Coy, Disbrow & Co., Inc., New York City—Robert H. Coy, Hamilton T. Disbrow, Geo. Churchill and John D. Wilson. Waldorf-Astoria.

Crocker-McElwain Company, Holyoke, Mass.—J. E. Holmes, T. W. Harrington, E. S. Dunbar and E. L. Miles.

Crown Card and Paper Company, New York City—Max Stuckelman and Samuel E. Strauss.

Dayton Envelope Company, Dayton, Ohio— J. E. Minch.

Deerfield Glassine Company, Monroe Bridge, Mass.—P. E. Hodgdon and W. A. Wylde. Lexington Hotel.

Detroit Sulphite Pulp and Paper Company, Detroit, Mich.—H. R. Telfer, Dr. R. Davis, K. G. Sell, T. J. Watson.

C. H. Dexter & Sons, Inc., Windsor Locks, Conn.—Dexter D. Coffin, Herbert H. Griswold and Herbert A. Wingate. Roosevelt Hotel.

District of Columbia Paper Mills, Inc., Washington, D. C.—H. R. Harrigan, W. W. Langtry, J. G. Turner and G. M. Watson. Waldorf-Astoria.

Eagle Paper and Twine Company, New York City—Jacob Glekel, Jacob Press.

Eastern Manufacturing Company, New York City—Geo. P. Lee, Edward M. Graham, Chas. G. Paine, E. T. Simpson, Frank H. Purington, Harold Knott, Geo. H. Attfield, John H. Calligan, Chas. MacFarlane, Ralph Will, H. Perkins and R. Barnes. Waldorf-Astoria.

Erving Paper Mills, Erving, Mass.—Morris Housen, L. L. Claflin and David Housen. Waldorf-Astoria and Barclay.

Escanaba Paper Company, Escanaba, Mich.—E. G. Bennett.

Charles A. Esty Paper Company, Worcester, Mass.—Merton C. Flemings. Lexington Hotel.

Falulah Paper Company, New York City—J. A. Moses and R. B. Burr.

Fort Hill Paper Company, Boston, Mass.—F. Bendel Tracy, John E. Roach, William C. Ross. Waldorf-Astoria.

Fox River Paper Corporation, Appleton, Wis.—E. A. Oberweiser, M. E. Roberts, R. F. Bellack, I. D. E. Oberweiser, F. C. Edwards and H. C. Krueger. Waldorf-Astoria

Franc-Graham Paper Company, Inc., New York City—Jerome Franc, Wilfred Graham and Henry M. Franc.

Franklin-Cowan Paper Company, Inc., Buffalo, N. Y.—Harold L. Cowan. Waldorf-Astoria.

Garrett Buchanan Company, Philadelphia, Pa.—Morgan H. Thomas, George Weaver, Joseph Miller, and C. Raymond Smith. Waldorf-Astoria.

Gilbert Paper Company, Menasha, Wis.—A. C. Gilbert, R. G. Whale, T. M. Gilbert and Roger Fuller. Waldorf-Astoria.

W. C. Hamilton and Sons, Miquon, Montgomery County, Pa.—H. H. Hanson, J. H. Dunton, Lane Taylor, A. F. Horton and T. D. Evans. Waldorf-Astoria.

Hammermill Paper Company, Erie, Pa.—H. R. Baldwin, A. E. Frampton, G. Richardson, H. R. Landers, T. W. McCormack, H. B. Wilson. Waldorf-Astoria.

Hawthorne Paper Company, Kalamazoo, Mich.—

G. H. Gerpheide and E. M. Cowling. Waldorf-Astoria.

Hollingsworth & Vose Company, East Walpole, Mass.—Thos. Compton Walsh. Commodore Hotel.

Hollingsworth & Vose Company, East Walpole, Mass.—Louis E. Vose. Biltmore Hotel.

Howard Paper Company, Urbana, Ohio—Ward R. Howard, H. A. Legge.

Charles F. Hubbs & Co., New York City—C. P. White, R. G. Kettles, Jr., L. J. Whiteford, H. W. Doremus, C. J. Slicken and H. A. Vandyck. Waldorf-Astoria.

Hubbs & Corning Company, Baltimore, Md.—H. A. Simpson.

Hubbs & Howe Company, Cleveland, Ohio—M. D. Gascon.

Hubbs & Howe Company, Buffalo, N. Y.—M. S. Dilts and Frank Howe.

Hubbs & Hastings Paper Company, Rochester, N. Y.—Ray F. Unger.

Hummel-Ross Fibre Corporation, Hopewell, Va. —Fred Hummel, John W. Sale and L. R. Boswell. Waldorf-Astoria.

Hurlbert & Hatfield, Boston, Mass.—Hartley A. Hurlbert. Waldorf-Astoria.

Hurlbut Paper Company, South Lee, Mass.—Edward A. Sitzer, Fred W. Main and Carl F. Werner. Waldorf-Astoria.

L. Hyman & Sons, New York City—Harry Z. Hyman, Moe Hyman.

Industrial Paper Company, Baltimore, Md.—Harry W. Turner and C. Warren Andrews, Jr. Waldorf-Astoria.

Interstate Cordage and Paper Company, Pittsburgh, Pa.—F. T. Jamison.

Knowlton Bros., Watertown, N. Y.—R. W. McCormick. Commodore Hotel.

Latex Fiber Industries, Inc., Beaver Falls, N. Y. —A. F. Owen. Gotham Hotel.

John Leslie Paper Company, Minneapolis, St. Paul, Great Falls, Minn.—Arnett W. Leslie. Waldorf-Astoria.

Louisville Paper Company, Louisville, Ky.—T. Floyd Smith, Jr.

Majestic Paper Corporation, New York, N. Y.— Adolph Warshow.

Maxwell Paper Company, Franklin, Ohio—W. B. Zimmerman.

McNeil Paper Company, Inc., Charlotte, N. C.— T. C. McNeil. Lexington Hotel.

Geo. W. Millar & Co., Inc., New York City— Walter Martens, John O'Brien, J. F. Levens, J. J. Dillon, L. C. Greenman, H. D. Beatty, C. H. Schorske, J. C. Mallalieu, Jr. Waldorf-Astoria.

Miamisburg Paper Company, Miamisburg, Ohio, and American Envelope Company, West Carrollton, Ohio—Carlton W. Smith, Albert E. Smith, Horace C. Tracy and Orvan P. Gebhart. Waldorf-Astoria.

Millcraft Paper Company, Akron, Cleveland, Toledo, Ohio—Harold W. Keil, C. H. Christiansen. Waldorf-Astoria.

Missisquoi Corporation, Sheldon Springs, Vt.— M. R. Vail, W. E. Smiddy, Jr., T. H. Hanna, Joseph Dixon, Joseph Starr, Jr., and E. R. Lyman.

Missisquoi Corporation, Sheldon Springs, Vt.— H. E. Raymond, Walter B. Sheehan, John Gale, Albert Bachmann, E. B. Sheaffer. Barclay Hotel.

Mohawk Paper Mills, Inc., Cohoes, N. Y.—George E. O'Connor, Harry T. Johnson, T. C. Nixon, Charles Leisler, David Rhoades, Wm. E. Sullivan and George F. Morrison. Waldorf-Astoria.

Mudge Paper Company, Baltimore, Md.—E. Tileston Mudge, II, and Howard H. Reese.

Mumford Paper Mills, Inc., Mumford, N. Y.— D. E. Leland. Waldorf-Astoria.

Munising Paper Company, Munising, Mich.—W. J. Garrity and Howard Morgan. Waldorf-Astoria.

National Container Corporation, Long Island City, N. Y.—Louis Rosenfeld and Samuel Kipnis.

National Paper Company, Rochester, N. Y.—Louis Solomon. Hotel Taft.

National Paper and Twine Company, Cleveland, Ohio—Harry Epstein.

Nekoosa-Edwards Paper Company, Port Edwards, Wis.—John E. Alexander, A. C. Remley and Lee Turley. Waldorf-Astoria.

Newhouse Paper Company, Des Moines, Iowa— Ray S. Pierce. St. Regis Hotel.

Oklahoma Paper Company, Oklahoma City, Okla. —Sidney Strauss and J. Rex Huguley. Waldorf-Astoria.

Paper Manufacturers Company, Philadelphia, Pa. —W. R. Lusignea, V. Dirvin, T. Mullan, F. A. O'Neill, Sr., F. A. O'Neill, Jr., and L. A. O'Neill. Waldorf-Astoria.

Peltz-Kaufer Company, Inc., South Bend, Ind.— J. A. Horning and E. Merle Green.

Peninsular Paper Company, Ypsilanti, Mich.— Daniel L. Quirk, Jr., and Daniel T. Quirk. Waldorf-Astoria.

Rising Paper Company, Housatonic, Mass.—S. C. Collins and R. H. Dempsey. Lexington Hotel.

Rising Paper Company, Housatonic, Mass.—Fred E. May, E. F. Woodin and R. B. Clark, Jr. Waldorf-Astoria.

Rochester Paper Company, Rochester, Mich.— Paul G. Cook, V. S. Bratton, Jr. Waldorf-Astoria.

Ronald Paper Company, Inc., New York City— S. C. Radom and J. S. Neidorff.

Royal Paper Corporation, New York City—A. Baron, S. T. Baron, Harry Baron and Beryl Finch. Waldorf-Astoria.

Schuylkill Paper Company, Philadelphia, Pa.— Frederic S. Balch. Lexington Hotel.

Scioto Paper Company, Columbus, Ohio—A. J. Ulrich. Lexington Hotel.

J. L. N. Smythe Company, Philadelphia, Pa.— T. H. B. Smythe and R. D. Perry. Waldorf-Astoria.

Southern Paper Products Company, Inc., Asheville, N. C.—J. L. Widman. Belmont-Plaza Hotel.

Stanford Paper Company, Washington, D. C.— Clyde Kellogg. Waldorf-Astoria.

Standard Paper Manufacturing Company, Richmond, Va.—James F. Ryland, G. A. Carlton and R. E. Estes.

Stern & Forsyth Company, Boston, Mass.—Edward J. Murphy. Waldorf-Astoria.

Stern & Forsyth Company, Boston, Mass.—Robert M. Stone and James J. Dwyer. Barclay Hotel.

Strathmore Paper Company, West Springfield, Mass.—H. A. Moses, J. D. Zink, E. M. Hughes, W. A. McGilpin, Cy Norton, R. F. Arnold, H. E. Riggs and B. E. Stafford. Waldorf-Astoria.

Tappen & Indruk Co., New York City—Walter B. Tappen and Gustave C. Indruk.

Tayloe Paper Company of Oklahoma, Tulsa, Okla. —Alfred D. Tayloe. Waldorf-Astoria.

Tobey Fine Papers, Inc., St. Louis, Mo.—S. M. Tobey. Waldorf-Astoria.

Valley Paper Company, Holyoke, Mass.—G. Stanley Morse. Gramercy Park Hotel.

Valley Paper Company, Holyoke, Mass.—George B. Fowler. Roosevelt Hotel.

Vernon Bros. & Co., New York City—C. W. Vernon, W. H. F. Gray and H. W. Pfalzgraf.

Walker Goulard Plehn Company, Inc., New York City—D. O'Meara, J. A. Burke, C. M. Smith, J. E. Walsh, Harold Burke, T. C. Goulard, J. Bernhardt, W. Martin, E. Walker, R. Plehn, J. Woolsey, J. Boak, A. C. Burghardt, G. Schneider, Jr. Hotel Shelton.

S. Walter, Inc., Philadelphia, Pa.—Simon Walter. Waldorf-Astoria.

S. Walter, Inc., Philadelphia, Pa.—T. F. Kennedy, Harry Lefkowith and V. L. Wilson. Barclay Hotel.

Whitaker Paper Company, Pittsburgh, Pa.—B. M. Johnson. Hotel Barclay.

Whiting-Plover Paper Company, Stevens Point, Wis.—F. B. Whiting, J. H. Miller, C. W. Spickerman and Louis Gailer. Waldorf-Astoria.

Wilcox-Walter-Furlong Paper Company, Philadelphia, Pa.—Thomas S. Furlong, Edw. T. Walter and Edw. V. Furlong. Waldorf-Astoria.

Williamsport Paper & Supply Co., Williamsport, Pa.—John A. Gerber and J. Ralph Hoskins. Lexington Hotel.

B. W. Wilson Paper Company, Inc., Richmond, Va.—H. V. Adams, H. S. Hundley and E. T. Lane, Jr. Lexington Hotel.

Zoeller Paper Company, Wilkes-Barre, Pa.—A. E. Zoeller.

Canadian Wholesale Assn. Meets

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., February 6, 1939—The annual meeting of the Canadian Wholesale Paper Dealers' Association was held on January 26 and was well attended, representatives being present all the way from Vancouver in the West to St. John in the East. The agenda, which consisted of reports from standing committees, and discussions on business and trade ethics was concluded in one day instead of taking two as formerly. Reports from various centres showed that the past year had been a fair one although orders dropped off considerably during the last three months of 1938. The outlook for 1939 was regarded as promising but care and conservatism were the watchwords.

H. F. E. Kent, of W. J. Gage and Co., Limited, Toronto, was re-elected president for the coming year and W. D. Nelson, of McFarlane, Son and Hodgson, Limited, Montreal, as vice president. T. J. Macabe, of Buntin, Reid Co., Limited, Toronto, was chosen as Honorary Treasurer and Ivan Moffitt, Toronto, as general secretary. C. H. McFarlane, Montreal, was again named as Honorary President and, in accordance with his usual custom, entertained the members to breakfast at the St. James Club, Montreal.

The annual banquet was an outstanding success and was attended by many representatives of the mills and paper supply houses. L. P. Turgeon, of Quebec City, introduced the speaker of the evening, Hon. T. J. Coonan, Montreal, who is a member of the provincial cabinet of Quebec. His subject was the "Responsibility of the Business Man to his Community", during which he gave his hearers many timely pointers and valued suggestions.

Dexter Sulphite to Continue

[FROM OUR REGULAR CORRESPONDENT]

DEXTER, N. Y., February 6, 1939—Following a conference last week of prominent business men with the Reconstruction Finance Corporation, at Washington, it was announced that the Dexter Sulphite, Pulp and Paper Company would resume operations under an equity receivership which will be responsible to federal court. Under the plan agreed upon the RFC will ask for an equity receiver of the federal court with consent of Watertown bankers, who are officers of the sulphite company, and all others concerned. The receiver will be a capable man experienced in sulphite manufacture and plant operation who will work under the direction of the court. This plan will continue for a period not yet fixed with the hope that business will improve and that the company may pay off its debts and become a going and profitable concern. Meanwhile, employees are to take a ten per cent cut in wages during the experimental period and an effort will be made to have the town and others reduce taxes. It developed at the conference that the company has on hand about $20,000 of the $350,000 borrowed from the RFC and quick assets of about $150,000. This $170,000 will be available for operation of the mill during the trial period. Success of the undertaking under an equity receiver, it was pointed out, depends largely upon local cooperation. The RFC took the position that its objective was to aid the company and especially to relieve unemployment and stressed that this was its original idea in making the loan. After the conference all joined in expressing satisfaction over the outcome.

Beach & Arthur Open N. Y. Sales Office

The Beach & Arthur Paper Company, of Indianapolis, Indiana, who operate a two machine tissue mill at Paperville, Pa. and converting plants at Indianapolis, Ind., North Wales, Pa. and Paperville, Pa., has recently opened a New York sales office located at 17 East 42nd street. This office will handle all of the sales for the eastern half of the United States.

The Beach & Arthur Paper Company, manufactures light weight paper for napkins, also, toweling, tablecloth stock, toilet tissue, paper for waxing, and light weight specialty papers. The general line of converted products consists of paper plates, cups, napkins, tablecloths, spoons, forks, etc. The New York office is in charge of W. H. Arthur, vice-president of the company.

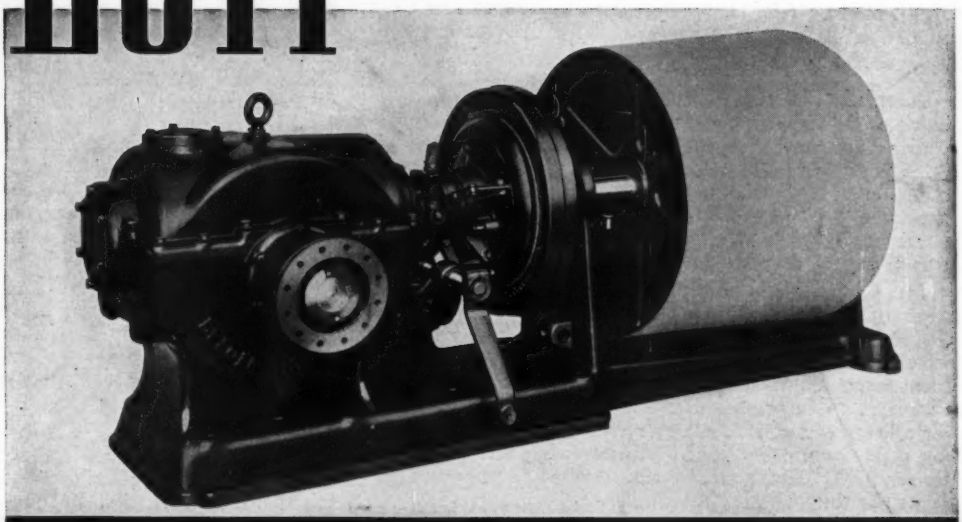
Micarta for Paper Mills

Micarta, a material actually lubricated by water and unaffected by chemicals, is described for the paper industry in a new booklet being distributed by the Westinghouse Electric & Manufacturing Company.

At least 150 pieces of Micarta may be used in a standard Fourdrinier paper-making machine, and the toughness and durability of the product eliminate costly shutdowns. One example of its durability is a Micarta toeblock in service in a New York mill for three years, with no appreciable wear.

Copies of booklet B-2156 may be obtained from headquarters of the Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pa.

BELOIT



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● Gears cut of special steel are totally enclosed and operate in bath of oil. Gear and pinion shafts are mounted on roller bearings which are automatically lubricated.

Equipped with improved Beloit automotive type clutch having unusually large air-cooled friction plate area. Oil lubricated throw out collar.

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E. A. Oberweiser Sells Whiting-Plover Stock

Former President of Whiting-Plover Paper Company Under Agreement Made In 1919 Sells 500 Shares of Stock To Trust Estate of the Late George A. Whiting—F. J. Sensenbrenner Honored For 50 Years' Service.

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., February 6, 1939—Sale of a block of 500 shares of stock of the Whiting-Plover Paper Company, Stevens Point, Wis., by Edward A. Oberweiser, its former president, to the trust estate created by the late George A. Whiting was approved by Judge S. J. Luchsinger in the county court at Oshkosh, Wis. last week. The price paid was $155,000, representing a value of $310 per share.

Mr. Oberweisr is now president and general manager of the recently organized Fox River Paper Corporation, Appleton, Wis., which purchased the Fox River Paper Company mills. Under an agreement executed in July, 1919, Mr. Whiting agreed that if Mr. Oberweiser would remain with the Whiting-Plover concern as secretary-treasurer, the Whiting estate would be required to purchase Mr. Oberweiser's 500 shares at any time within seven years from the time of Mr. Whiting's death.

Mr. Oberweiser elected to exercise his right in this agreement in July, 1937, but in accordance with an option given him in the agreement, objected to selling for book value of the stock. This book value was then $275 a share, whereas at the time of Mr. Whiting's death it was appraised at $385.90 per share and was set up for inheritance tax purposes at $435 per share.

After extended negotiation, a price of $310 was agreed upon, and the transaction was approved by the residuary beneficiaries of the trust at $155,000. They are Frank B. Whiting, who succeeded his late father as president of the George A. Whiting Paper Company, Menasha, Wis., George A. Whiting, Isabella E. Schroeder, Frances E. Whiting and Fredrika G. Whiting.

When Mr. Oberweiser resigned as president of the Whiting-Plover Paper Company and retired from the business, Frank B. Whiting succeeded him as president. Mr. Whiting and George Hilton of Oshkosh, Wis., are executors and trustees under the Whiting will.

F. J. Sensenbrenner Honored for Long Service

Frank J. Sensenbrenner, president of the Kimberly-Clark Corporation, Neenah, Wis., was given a recognition dinner at the Valley Inn at Neenah last week marking the fiftieth anniversary of his association with the company. The event was arranged by the executive committee, and the guests included the board of directors, officers, plant managers and staff heads. Also attending were Charles S. Pearce of the International Cellucotton Products Company, and Egerton S. Noble, George Barber and Ralph M. Watt of the Spruce Falls Power and Paper Company, with both of which organizations Kimberly-Clark is associated.

Ernst Mahler, executive-vice-president, presided. He called upon Fred Kranhold, Mr. Pearce and Mr. Noble for remarks. S. F. Shattuck, vice-president, in behalf of the executive committee, presented Mr. Sensenbrenner a token of appreciation in the form of an illuminated manuscript embodying an expression signed by all of the diners. The work was done on heavy vellum and bound in red Moroccan leather. A second volume, similarly bound with hand illuminated frontispiece, was also presented for mounting of anniversary letters and messages which it was expected would be received in profusion from his many friends and associates throughout the United States and Canada.

Mr. Sensenbrenner's response recounted interesting incidents of his early days with Kimberly-Clark, anecdotes relating to the founders of the business, and an account of the growth of the organization during his half century of participation and leadership in its affairs.

Mr. Mahler, during the course of his remarks, called attention to the following brief item which appeared fifty years ago in The Neenah Times: "Frank J. Sensenbrenner is now bookkeeper for the Kimberly-Clark Company. He will have paper mills of his own some day." This item reappeared in The Neenah Times a quarter of a century later (1914) in the "Twenty-five Years Ago," column, and led the Appleton Post to comment on the progress Mr. Sensenbrenner had made, and adding: "The Post would like at this point to indulge in a little moralizing on the personal endowments of the subject and his application and faithfulness to his employer's interests, which resulted long before 25 years were passed in his being given high responsibilities with the company, but it would only be repeating what everyone sees and knows. Nevertheless it is a pleasure, even thus indirectly and inadequately to acknowledge a community indebtedness for a valuable example before having to wait to do it in an obituary notice."

Pool Car Shipments Increasing Steadily

Growth of the pool car shipping system of the Wisconsin Paper Group was described by its executive secretary, Irwin Pearson of Neenah, Wis., at a meeting last week of the Lions Club of Menasha, Wis. Last year the pool handled 2,130 cars, he said, of which 862 were loaded at its warehouse at Menasha, Wis. The tonnage has grown steadily since the pool was organized five years ago, and has benefited trucking concerns as well as the mills and jobbers because of the loads hauled to the warehouse from nearby mills.

The service has resulted in more orders for the 27 member mills and converters, Mr. Pearson declared. More than 50 regular schedules of a car a month or more are now maintained at a decided saving in freight. Figures show, he said, that the average carload rate is 46 cents per hundredweight, while the less-than-carload rate otherwise paid by the jobbers is 63 cents higher. The 27 members reported 109,000,000 pounds of orders.

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Nowave
Patent Applied For
The Jones
Plug and Shell Fillings
WAVY Jordan Fillings have always been a problem to Mill Operators and a challenge to Filling Manufacturers . . . resulting in inefficient stock treatment and short filling life.
WE NOW OFFER THE FIRST STRAIGHT WEARING PLUG AND SHELL FILLING TO JORDAN USERS
Research and practical tests show straight bar wear for our NOWAVE Fillings — this assures uniform jordaning with resultant product improvement — and added filling life.
YOUR MONEY'S WORTH WITH Nowave

STOPS "ROUGH SLEDDING"
OF YOUR *Filling Dollars*

Jones

E. D. JONES & SONS COMPANY-PITTSFIELD, MASS.
Builders of Quality Machinery for Paper Mills

Most Canadian Imports Come From U.S.

Importations of Paper, Pulp and Pulpwood Total $8,297,216 For 1938 With Largest Part Imported From U.S.A. — Forest Engineers Make Recommendations To Be Submitted To the Minister of Lands and Forests.

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., February 6, 1929—Official returns just issued show that in the calendar year 1938 Canada's importations of paper, wood pulp and pulpwood amounted to $8,297,216, as compared with $8,814,773 in 1937. By far the largest part of these imports came from the United States. The following are some of the principal items, with the totals for the previous year in brackets: Unbleached sulphite pulp, $510,446 ($654,179); pulpwood, $206,488 ($112,785); paper-card stock, bristol board and blanks, ticket board and similar boards, $155,115 ($92,528); electrical insulating pressboard, $25,265 ($42,586); pulp board in rolls for manufacture of wall board, $98,950 ($94,456); board for manufacture of shipping containers, $99,816 ($19,990); wall board, building and insulating board, $304,675 ($315,971); pulpboard and other fibreboards, $272,375 ($325,797); enamelled paper, $18,516 (none); carbon paper, $22,167 (none); book printing and litho paper, not pasted or coated, $258,133 ($282,393); book printing and litho paper, coated, $41,574 ($59,647); cover papers, not pasted, coated or embossed, $11,455 ($20,382); cover papers, pasted, coated, or embossed, $28,151 ($53,165); glazed or unglazed surface coated paper, $280,489 ($376,837); grease proof and glassine paper, not pasted, coated, or embossed, $44,086 ($54,547); tissue wrapping paper, $27,410 ($27,825); vegetable parchment paper, $29,718 ($41,362); waxed paper in package form, $16,801 (none); waxed paper for lining or wrapping, $87,945 (none); waxed paper, n.o.p., $125,924 ($291,289); kraft wrapping paper, $14,818 ($19,546); oiled or coated wrapping paper, $31,657 ($18,460); wrapping paper, all kinds, n.o.p., $235,246 ($320,166); Duplex and verichrome paper, $100,122 (none); bond and ledger papers, writing and envelope paper, uncut, $167,055 ($223,400); envelopes, $125,472 ($126,750); ruled, border and boxed papers, $17,749 ($26,529); albumenized and other papers prepared for photographer's use, $210,323 ($181,305); blotting paper, not printed or illustrated, $39,734 ($37,526); cigarette paper, ungummed, in rolls, $29,750 ($108,417); cigarette papers, gummed or not, in tubes, booklets and packages, $479,016 ($474,808); crepe paper, decorative, and paper napkins, n.o.p., $27,781 ($47,646); gummed paper, $60,958 ($68,151); hanging or wall paper, including border, $136,147 ($154,306); paper matrix not being tissue paper, for use in printing, $115,744 ($122,935); paper adapted for use exclusively in the manufacture of albumenized or sensitized paper, $128,039 ($106,852); tarred paper and prepared roofing (including shingles) and sheathing $64,327 ($63,007); tissue paper, n.o.p., $86,622 ($144,515); toilet paper, $96,683 ($77,614); facial tissues, handkerchiefs, waddings and other similar absorbent tissue papers, $510,217 ($353,193); towels and napkins of paper, $51,311 ($60,274); napkins of paper, n.o.p., $16,591 ($23,743); waxed stencil paper for use on duplicating machines, $130,458 ($128,805); cable insulating paper, $45,306 (none); cash register and adding machine paper, $10,681 (none); filter paper, $23,011 (none); tabulating paper and stock, $22,383 (none); paper, all kinds, n.o.p., $327,986 ($658,688); bags or sacks of paper, $116,608 ($144,972); containers wholly or partially manufactured from fibre board or paper board, n.o.p., $326,664 ($509,022); paper tubes or cones for winding yarns thereon $23,884 ($40,913); paper cups, dishes and paper tableware, n.o.p., $46,416 (none); paper doilies and lace paper, $20,091 (none); paper novelties, flowers, confetti, etc., $134,439 (none); paper patterns, n.o.p., not printed, $13,403 (none); shipping containers wholly or partially manufactured from fibre board or paper board $124,486 (none); papeteries and all other manufactures of paper, n.o.p., $1,069,018 ($1,387,220); paper cores, $15,550 (none).

Forest Engineers Make Recommendations

At a convention of the Quebec Association of Forest Engineers, held in Quebec City, what was termed "a program of action and of forest policy for the Province of Quebec" was adopted unanimously and later submitted to the Minister of Lands and Forests. The following is a summary:

Research: The organization of an Institute of Research which would study the climatic conditions, the soil, the growing of the trees, etc.

Social Aspects: The classification of the lands in order to separate the forestry lands from the colonization lands; to encourage the organization of sales co-operatives, to help the colonist to sell his wood; to make an effort to reforest 3,000,000 unproductive acres which belong to individuals.

Salaries: The working man in the forest must receive sufficient wages in order that he and his family can live decently.

Publicity: The association recommends a campaign of publicity and education to encourage the use of our forestry products.

Protection: The association recommends also the revision of all the by-laws referring to the protection of the forests.

Inventory: Separate the forestry domain from the agricultural in order to assure the stability of both industries; prepare an inventory of all our forestry resources.

Reforms: The reforms most urgently suggested include: statistics concerning the forests; rational operations; completion of a national inventory and an annual report; an adequate forestry budget; the regulating of the cutting; employment of the out-of-works as far as possible; protection of the forests; building of towers, roads, portages, reforestation, development of national parks, etc.; an interprovincial convention to stop minor competition and to adopt a policy as uniform as possible in its laws and regulations.

Financial News of Pulp and Paper Industry

Union Bag and Paper Corp. Sales Increase Each Year—Loss Reported By Lake St. John Co. For 1938—West Virginia Pulp and Paper Co. Reports Net Profit For 1938—The Flintkote Co. Has Net Income of $811,818.

NEW YORK STOCK EXCHANGE

High, Low and Last for the Week Ending February 8, 1939

	High	Low	Last
A. P. W.	2¼	2¼	2¼
Armstrong Cork Co.	51¾	50	50¼
Celotex Corp.	17¾	16	16¾
Celotex Corp., pf.	68	67¾	68
Certain-Teed Products Corp.	11⅛	10⅛	10½
Certain-Teed Products Corp., pf.	41	40	40½
Champion Paper & Fibre Co.	26¼	26	26
Champion Paper & Fibre Co., pf.	100½	100	100½
Congoleum-Nairn Co.	26½	25⅝	26
Container Corp. of America	14	13½	13½
Continental-Diamond Fibre Co.	8⅝	8	8
Crown-Zellerbach Co.	13½	13	13¼
Crown-Zellerbach Co., pf.	89⅜	88½	89
Flintkote Co.	28	26⅞	27
Robert Gair	3½	3¼	3⅜
Robert Gair, pf.	11	10⅞	11
International Paper & Power	12¾	11¾	12⅛
International Paper & Power, pf.	45¾	42¾	43⅝
Johns-Manville Corp.	96	92¾	96
Kimberly-Clark Corp.	25	25	25
MacAndrews & Forbes	32	31	31¼
MacAndrews & Forbes, pf.	124	124	124
Masonite Corp.	51	49½	50
Mead Corp.	11¼	10¼	10½
Mead Corp., pf.	69	69	69
Paraffine Companies, Inc.	54½	53	53
Paraffine Companies, Inc., pf.	100½	100½	100½
Ruberoid Co.	28½	27¾	27¾
Scott Paper Co.	47	46⅜	47½
Scott Paper Co., pf.	114½	114	114½
Sutherland Paper Co.	29	28½	28½
Union Bag & Paper Corp.	11⅛	9¾	10¾
U. S. Gypsum Co.	101¼	99	99
U. S. Gypsum Co., pf.	177	177	177

NEW YORK CURB EXCHANGE

High, Low and Last for the Week Ending February 8, 1939

	High	Low	Last
American Box Board Co.	7¾	7½	7½
Great Northern Paper	39	38½	38½
St. Regis Paper Co.	3¼	2⅞	2⅞
St. Regis Paper Co., pf.	59¾	59¾	59¾
Taggart Corp.	4¾	4½	4½

Union Bag Earns $1,088,193

The Union Bag and Paper Corporation earnings in 1938 will total $1,088,103 net after all charges but before Federal Income and Capital Stock taxes estimated at $181,301 according to a preliminary report made public by Alexander Calder, president. This would make the estimated net profit after taxes equal to 86 cents per share on the 1,052,274 shares of capital stock outstanding at the close of the year.

These earnings are after a year-end write-down of raw material inventories and a charge for research development expense totaling $51,351. Figures for 1938 are subject to any adjustment that may be required upon completion of the annual audit.

In 1937 Union Bag and Paper Corporation earned a net income (after taxes) of $1,384,595, equal to $1.32 per share on the same number of shares.

Net sales for 1938, totalling $16,517,875 continue the consistent annual increase which has followed the company's construction of its new mill at Savannah, Georgia.

"No better indication of the value of the new low-cost Savannah mill can be found than a comparison of sales and profits annually since 1935, when the first unit Savannah started construction". Mr. Calder said in commenting on the report. "Starting with net sales of $9,534,626 in 1935, 1936 increased to $11,770,787, 1937 to $15,690,960 and 1938 to $16,517,875. It should be kept in mind that the 1938 figure was despite prices on our major products being from 20 to 25 per cent below the previous four year average. Net profits (after taxes) for the same years were respectively $223,459, $387,391, $1,384,595 and $903,892. With higher prices recently announced, prospects for 1939 are very encouraging."

Lake St. John Reports Loss

The Lake St. John Power and Paper Company, Ltd., reports as follows for 1938: Net loss, $43,838 after bond and debenture interest, against net profit of $197,680 reported the year before. Current assets as of December 31 amounted to $3,388,781 including accounts receivable of $1,367,800 and inventory of $1,981,649. Accounts payable include a bank loan of $1,196,500 and total $1,607,500. In previous year accounts receivable were $478,639 and company did not have any bank loans.

Heads Clement Paper Co.

NASHVILLE, Tenn., February 6, 1939—John F. Bell has been elected as president of Clements Paper Company. Having been with the company for more than twenty-five years, and having served as secretary-treasurer and general manager since 1932, Mr. Bell is not only thoroughly familiar with but has had a large part in the molding of the policies of our company.

Schumacher Wall Board Declares Divide

Schumacher Wall Board Corporation declared a dividend of $1.50 a share on the $2 participating preferred stock on account of accumulations, payable February 15 to stockholders of record February 5. After the above disbursement dividend arrears will amount to $8 a share, according to Fitch's statistical service.

West Virginia Reports $451,276

The West Virginia Pulp and Paper Company reports as follows for the twelve months to December 31: Net profit, $451,276, equal to $2.89 each on 155,830 shares of $100 par, 6 per cent preferred stock. For the fiscal year ended on October 31, 1938, the net profit was $260,353, or $1.67 a share on the preferred.

Flintkote Make Good Report

The Flintkote Company and Subsidiaries report as follows for 1938: Net income, $811,818, equal to $1.21 each on 672,996 outstanding shares. Net income in 1937 was $1,005,423, or $1.50 a share on the 670,346 shares then outstanding. Net sales were $15,147,709 for last year, against $15,163,867 in 1937.

J. H. Brewer Heads N. E. Paper Men

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., February 6, 1939.—John H. Brewer, of Storrs & Bement Company, was elected president of the New England Paper Merchants Association at the annual meeting of the organization held Wednesday evening at the Parker House. Other officers chosen were: First vice-president, in charge of the Wrapping Paper Division, John F. Blackman, of the D. F. Munroe Company; second vice-president, in charge of the Fine Paper Division, Frederick G. Lockwood, of Knight, Allen & Clark, Inc.; treasurer, Frank B. Cummings; acting secretary, Floyd H. Blackman, of D. F. Munroe Company. Directors, Charles A. Esty, Carter, Rice & Co., Corp.; Leon M. Poore, John Carter & Company, Inc.; Henry J. Dowd, H. J. Dowd Co., Inc., Cambridge, Mass.; Robert M. Stone, Stone & Forsyth Company; Samuel L. Ginsburg, Ginsburg Bros., Inc., Somerville, Mass.; John R. Halkyard, Carter, Rice & Co., Corp.; James C. Campbell, Industrial Paper & Cordage Company, Pawtucket, R. I., representing Rhode Island and Southern Massachusetts; Sterling R. Chatfield, of Minotte E. Chatfield Company, New Haven, representing Connecticut; John R. Whitney, Whitney-Anderson Company, Springfield, Mass.; Ray A. Switzer, Mount Kilburn Paper Company, Inc., Bellows Falls, Vt., representing Maine, New Hampshire and Vermont. Auditor, H. E. Jefferson, Carter, Rice & Co., Corp. Delegates to the National Paper Trade Association, John H. Brewer and Floyd H. Blackman. Alternates, Leon M. Poore and John R. Halkyard.

J. H. BREWER

President Halkyard Presides

There was an attendance of 33, with President John R. Halkyard opening the meeting. President Halkyard reported on the activities of the last year. Vice-president John H. Brewer reported on the fine paper activities and Vice-president John F. Blackman for the wrapping paper group. Mr. Halkyard, the retiring president, was given a vote of thanks for serving during the last year.

Two new members were voted in: Sugarman Bros., Cambridge, Mass., and Malone Brothers Company, Chelsea, Mass.

Arthur C. Babson, of the Babson Statistical Organization, Inc., Wellesley, Mass., spoke on the Business Outlook and A. R. Jackson secretary of the Wrapping Paper Division of the National Paper Trade Association on the activities of that organization.

Champion Paper to Participate Actively

The Champion Paper and Fibre Company are planning what will probably be one of the most outstanding exhibits presented at the Southern Paper Festival in Savannah which is to be held on April 17-18-19, having reserved the main lobby of the Auditorium where the Paper Products Exhibition will be held for their presentation and which will portray a story of vital interest to all.

Amongst those attending the festival from this company will be Alexander Thomson, Jr., advertising manager, Hamilton, Ohio, C. A. Labor, manager of the Philadelphia office, J. R. Aust, manager Southern sales office, St. Louis, William Benzing, sales manager of the Canton, N. C. plant, and they are also arranging for active representation from their distributors.

The De Soto Hotel and Savannah Hotel are being reserved exclusively for those representing the paper industry and it is suggested that all of those desiring to attend this festival make their reservations as soon as possible as the available space is rapidly being taken up.

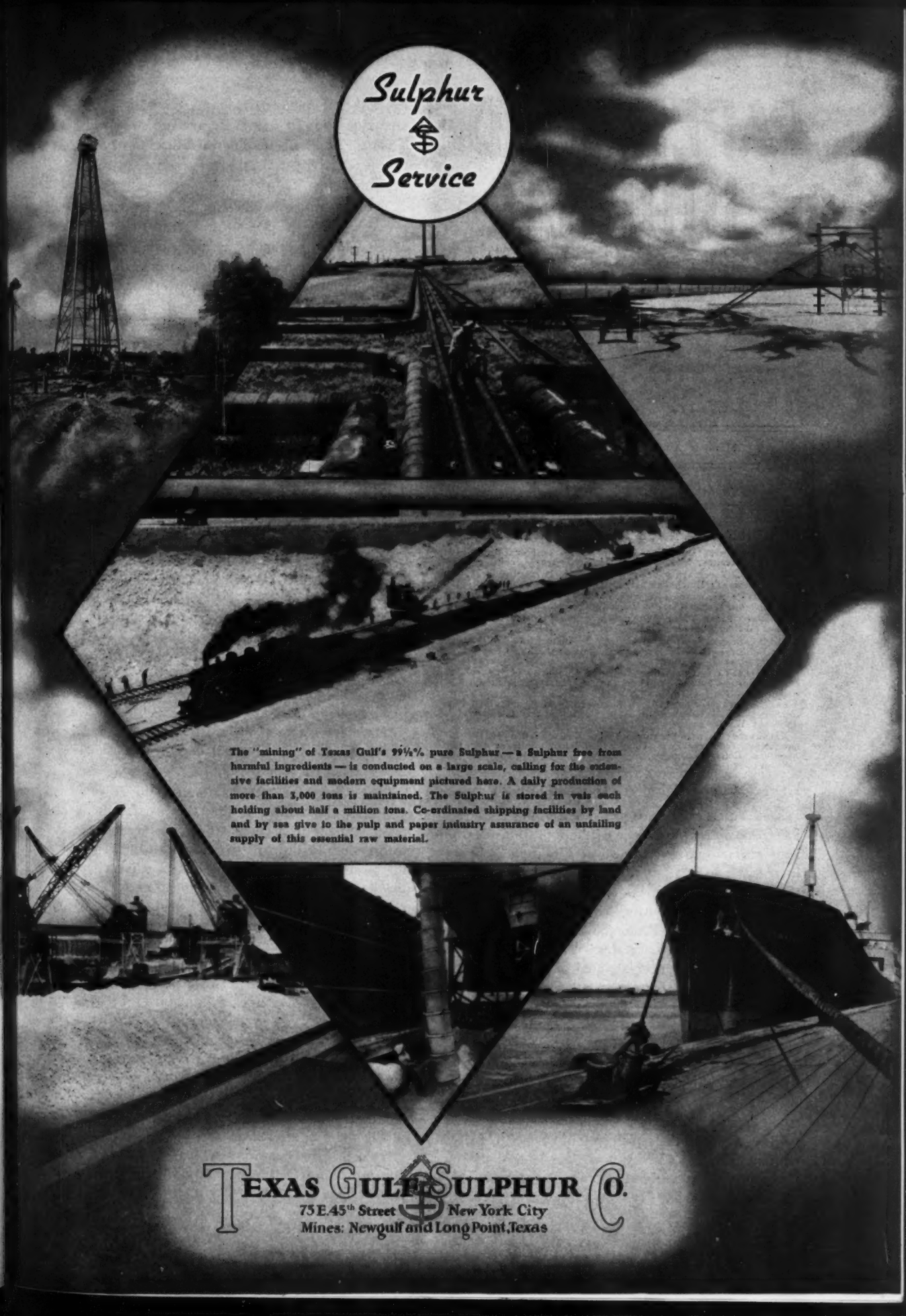
Speaks in Salesmen's Course

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., February 6, 1939—Let George do it—don't do it yourself. To make a demonstration sell, to harness the buy-it-urge, resist that impulse to demonstrate yourself. This is a proven basic principle of selling. Put your prospect—not yourself—in the demonstrator's seat. Actual sales records show that the men we will discuss top their field in the art of making a demonstration sell. Learn how they do it. This was the subject matter of Demonstration Number Two in the Salesmen's Study Course, being conducted under the auspices of the Paper Trade Association of Philadelphia at Franklin Institute. With John C. Alden, Philadelphia manager of Dixie-Vortex Company, makers of paper cups, as principal speaker, the one hundred and fifty students enrolled in the course were treated to an instructive and interesting lecture, accompanied by moving pictures, depicting the benefits of demonstrating.

Great Atlantic Carries Large Color Stock

The Great Atlantic Paper Company, 591 Washington Street, New York, according to J. Galewitz, president, is now carrying in stock one of the largest lines of colored papers in the country, consisting of the following items; Rio Index, White and five Colors, Rio Bond, White and ten Colors, St. Regis Bristols, White and ten Colors, E. F. & Super Book Papers, White and seven Colors, Newsprint Paper, White and six Colors.


Sulphur
Service
The "mining" of Texas Gulf's 99½% pure Sulphur — a Sulphur free from harmful ingredients — is conducted on a large scale, calling for the extensive facilities and modern equipment pictured here. A daily production of more than 3,000 tons is maintained. The Sulphur is stored in vats each holding about half a million tons. Co-ordinated shipping facilities by land and by sea give to the pulp and paper industry assurance of an unfailing supply of this essential raw material.
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PAPER TRADE JOURNAL

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COMING EVENTS IN PAPER INDUSTRY

AMERICAN PAPER AND PULP ASSOCIATION, Sixty-second Annual Convention and meeting, Waldorf-Astoria Hotel, New York. February 20-24.

TECHNICAL ASSOCIATION OF THE PULP AND PAPER INDUSTRY, Convention, Roosevelt Hotel, February 20-23.

SALESMEN'S ASSOCIATION OF THE PAPER INDUSTRY, Annual Meeting and Luncheon, Waldorf-Astoria Hotel, New York, Tuesday, February 21.

NATIONAL PAPER TRADE ASSOCIATION OF THE UNITED STATES, Convention, Waldorf-Astoria Hotel. New York. February 20-22.

NEW ENGLAND SECTION. Technical Association of the Pulp and Paper Industry—Third Friday of each month at the Roger Smith Hotel, Holyoke, Mass.

DELAWARE VALLEY SECTION. Technical Association of the Pulp and Paper Industry—Second Friday of each month at the Engineers Club, Philadelphia, Pa.

LAKE STATES SECTION. Technical Association of the Pulp and Paper Industry—Second Tuesday of each month at the Conway Hotel, Appleton, Wis.

KALAMAZOO VALLEY SECTION. Technical Association of the Pulp and Paper Industry—First Thursday of each month at the Park, American Hotel, Kalamazoo, Mich.

MONOPOLY AND RECOVERY

With an estimated unemployment in this country of 9,000,000 able workers one of the most difficult problems confronting government and industry is how to increase industrial activity to absorb these unemployed and raise the national income to increase the nation's purchasing power to a level which will assure prosperity for all. From the data supplied by economists at Washington it appears that the highest industrial production ever attained in this country was about 125 per cent for one month in 1929, compared with a base of 100 per cent for the years 1923-25. The average for the year 1929 was about 119 per cent of the 1923-25 average.

But, owing to the number of persons of working age added to the population since that time, an operating rate of 150 per cent of the 1923-25 average is held to be required for full employment today. With world-wide conditions plainly less favorable for expanding business activity now than in those former prosperous years, we have also made great technological progress and have created and, in every probability, will continue to develop in the not distant future, new industries as well as rejuvenate some old ones. Thus old standards used as yardsticks to measure future productivity and progress are not entirely to be depended upon.

The long range outlook for business is thus more promising than the present prospect. From the point of view of Government economists there is doubt that industry alone can ever again provide work for all those who need and are able to work. The solution of the problem suggested by Louis Bean, economic adviser to the Secretary of Agriculture, is for Government-business cooperation to promote investment of idle funds in fields where maximum employment may be effected with the minimum risk on the investment. This idea appears to be receiving increased support in Washington.

At the moment, monopoly and prices are given prominence and from the debate held last month at Town Hall, New York, between a spokesman for the Administration and the head of a large manufacturing enterprise, there is evident a confusion of economic viewpoints as well as objectives in promoting business recovery. In presenting the view of the Administration Thurman W. Arnold, Assistant Attorney General in Charge of Anti-trust Prosecutions, said in part: "It is apparent that we cannot base our distribution system on the assumption that $5,000 a year is a normal income. We cannot even rest our distribution system on the 13 per cent of families who get more than $2,500 a year, because they total less than the population of the State of New York. We cannot produce for a nation the size of America and limit our distribution to the population of a State. There, in a nutshell, is our distribution problem.

"What have the anti-trust laws to do with this situation? The answer is that they represent an approach to the problem based on the conviction that prices must be brought within the reach of purchasing power, for free and independent enterprise to do the job . . . A growing movement to stabilize and rationalize industries both small and large is felt on every hand. Local groups are combining with national industries in building trade barriers to dominate both local and national markets, increasing in direct proportion as their activites are permitted to go unrestricted. A case-by-case adjustment between the techniques of mass production on the one hand and free competition on the other is the only method by which reasonable and fair enforcement of the anti-trust laws can be effected . . . This is not a regulation of what business must do, but a clarification of what business may do. The great advantage of applying the rule of reason which is a necessary part of the anti-trust laws, is that it allows us to take up one problem at a time in the light of its particular facts. This is the only way of avoiding the pitfalls

of general regulation and permanent social planning."

In pointing out that monopolies are not always detrimental and in discussing prices, A. W. Robertson, chairman of the board of The Westinghouse Electric Manufacturing Company, said in part: "Business recognizes fully the advantages of lower prices and greater consumption, as witness the reduction in the price of automobiles, refrigerators and electric lamps, to name only a few products, but it has no faith in the wholesale reduction of prices when business is falling. Such a course would only delay buying still more and speed the day when business generally would operate at a loss and face ultimate ruin.

"There is another disadvantage to be met in a general price reduction, and that is the certain reduction in wages of labor which no one recommends, except as a last resort. The Federal Government has heretofore openly advocated the advantage of raising prices —to the 1926 level, for instance; now it is advocating reducing prices. Recent surveys show that price reductions do not stimulate buying when other factors are present; for instance, the fear of unemployment. I could think of nothing more devastating to our economic structure than a universal price war.

"Finally, this analysis leads to the conclusion that both monopoly and competition are needed to advance business recovery, so mingled in our philosophy as to distill the good of each and reject the evil of each. Monopoly is the popular Devil. It is in truth no more evil than competition; each has the power to destroy if unrestricted; but each is also good in its own right and is the natural and necessary complement of the other."

Government Paper Bids

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., February 8, 1939—The Government Printing Office has received the following bids for 1,300 sheets of 21 x 24 white sensitized paper; R. P. Andrews Paper Company, $40.00 per M sheets; Mathers-Lamm Paper Company at $18.00 and $27.00; and Ditto, Inc., $27.50.

For 60 pounds of 25 x 38 offset book paper; Maxwell Paper Company, $7.16.

For 55,000 pounds of different colors calendered tag board: Barton, Duer & Koch Paper Company, 7.73 cents.

Turkey Builds New Paper Mill

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., February 6, 1939—The construction of the pulp and paper mill at Izmit, Turkey, is proceeding rapidly and it is expected to be ready for operation by the middle of 1939, according to reports from the office of the American Consulate General, Istanbul. Production by this mill will be in the neighborhood of 15,000 tons per year. The completion of this mill will bring paper production in Turkey up to 25,000 tons annually, which is only 10,000 tons under estimated consumption.

Production Ratio Report

These statistics are based upon paper production reports to the American Paper and Pulp Association.

COMPARATIVE MONTHLY SUMMARIES

Months	1939(c)	1938(c)	1937(c)	1936	1935	1934
January	76.7%	63.9%	90.3%	76.1%	65.8%	.....
February	.....	68.7%	90.1%	77.9%	70.0%	.....
March	.....	69.6%	90.3%	76.0%	70.5%	.....
April	.....	68.3%	92.1%	82.3%	70.0%	.....
May	.....	69.0%	90.6%	81.6%	69.4%	.....
June	.....	66.0%	87.3%	80.7%	72.3%	.....
July	.....	72.0%	81.8%	77.3%	64.9%	.....
August	.....	77.2%	82.9%	81.5%	70.9%	.....
September	.....	76.3%	78.6%	80.5%	71.9%	58.2%
October	.....	82.5%	73.5%	87.6%	75.6%	64.7%
November	.....	79.6%	61.9%	88.0%	75.3%	61.7%
December	.....	74.5%	54.5%	85.9%	71.2%	59.6%
Year Average	.....	72.3%	80.6%	81.3%	70.5%	.....
First 4 weeks	76.7%	63.9%	90.3%	76.1%	65.2%	.....

COMPARATIVE WEEKLY SUMMARIES

CURRENT WEEKS		CORRESPONDING WEEKS	
*December 24, 1938	76.7%	December 25, 1937	48.6%
*December 31, 1938	62.9%	January 1, 1938	47.0%
*January 7, 1939	69.8%	January 8, 1938	59.2%
*January 14, 1939	80.3%	January 15, 1938	62.3%
*January 21, 1939	78.3%	January 22, 1938	66.0%
*January 28, 1939	79.8%	January 29, 1938	68.1%

The following statistics show the number of mills reporting by ratio groups:

	Number of Mills Reporting, Current Weeks					
Ratio Limits	Dec. 24, 1938	Dec. 31, 1938	Jan. 7, 1939	Jan. 14, 1939	Jan. 21, 1939	Jan. 28, 1939
0% to 50%	64	115	83	62	55	44
51% to 100%	240	190	221	234	234	147
Total Mills Reporting	304	305	304	296	289	191

* Subject to revision until all reports are received.
(c) Basic capacity data have been adjusted to correspond with ratings reported by individual companies.

PAPERBOARD OPERATING RATIOS

According to reports from the National Paperboard Association, per cents of operation, based on "Inch-Hours", were as follows:

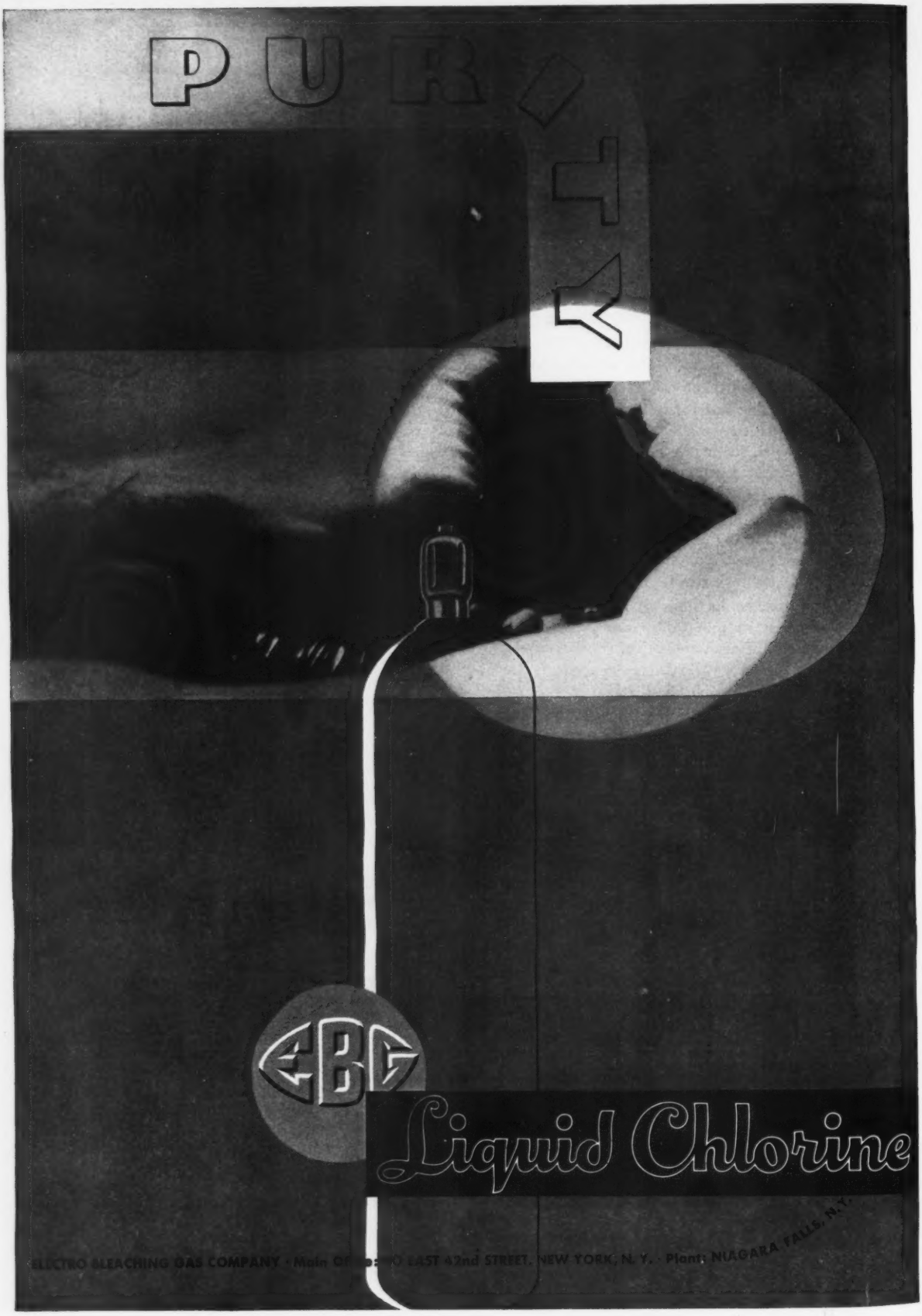
Mos.	1938 (e)	1937 (e)	1936	1935	Mos.	1938 (e)	1937 (e)	1936	1935
Jan.	55%	80%	61%	61%	July	57%	67%	69%	59%
Feb.	61%	86%	67%	67%	Aug.	66%	74%	75%	65%
Mar.	60%	87%	68%	67%	Sept.	66%	70%	76%	69%
Apr.	57%	89%	70%	61%	Oct.	70%	66%	82%	76%
May	58%	86%	68%	61%	Nov.	64%	56%	79%	70%
June	56%	75%	68%	65%	Dec.	58%	46%	74%	60%

Week end. Dec. 24, 1938—69%
Week end. Dec. 31, 1938—35%
Week end. Jan. 7, 1939—45%
Week end. Jan. 14, 1939—62%
Week end. Jan. 21, 1939—65%
Week end. Jan. 28, 1939—68%

(e) Basic figures revised to include new members of the National Paperboard Assn.

Unemployment Acute in Canada

TORONTO, Ont., February 6, 1939—At a recent meeting held in Fort William, Ont., to deal with the sharp decrease in operations in lumber and pulpwood camps and unemployment, it was stated that increasing penetration by Baltic countries into the $200,000,000 forest products market of the United States, was strangling bush activities in northwestern Ontario. It was decided to ask the Ontario government to appoint an outstanding economist to grapple with the most acute unemployment crisis existing for many years. Norman M. Paterson, of Fort William, declared that seventy per cent of the population normally engaged in the forest products industry was idle. Edward E. Johnson, leading pulpwood operator, said that the United States adjacent to the Great Lakes last year imported from Baltic countries 1,700,000 tons of chemical pulp and 300,000 tons of newsprint while northwestern Ontario pulp and paper mills were functioning at from 50 to 60 per cent capacity.


PURO
EBG
Liquid Chlorine
ELECTRO BLEACHING GAS COMPANY · Main Office: 60 EAST 42nd STREET, NEW YORK, N. Y. · Plant: NIAGARA FALLS, N.Y.

Section of the
Technical Association of the Pulp and Paper Industry

Edited by Ronald G. Macdonald. Secretary

Power Data For Paper Mills*

By H. W. Rogers[1]

The Committee on Power and Lighting Requirements of the Technical Association of the Pulp and Paper Industry has been working for some time towards the accumulation of authentic power data on paper mill machinery and incidentally the power required to manufacture the different kinds of paper.

Power data on paper machines has already been submitted (Technical Association Papers—June 1936) and data on beaters and winders will shortly be presented. It was generally believed that a great deal of power data was already in existence and available, but in most cases this appears to be incomplete and not sufficiently authentic to be submitted.

There is some tendency to consider such data as confidential because of the mistaken feeling that it might possibly reveal trade secrets when as a matter of fact the same machines are available and used in all mills, and the process of making paper is pretty generally known. True, the process may vary to some extent depending on the product manufactured, but it is difficult to imagine how it could long remain unknown with the shifting labor encountered in most mills. Furthermore, if certain phases of a process are patented, there is nothing to be lost by contributing data to the trade and it might conceivably advance the art and tend to greater progress.

Fortunately some mills and some machinery manufacturers recognize this condition and are willing to cooperate in the work of this committee. For such assistance the committee is duly grateful. It is hoped that the publication of this data will encourage other mill operators to submit similar data to the Committee.

Herewith is submitted power data on a sulphite pulp and paper mill which manufactures bond, ledger, cover and mimeograph paper.

Wood Department

16 hours per day operation.

	Average Load in kw.	Kw. Hr. Per Day
CONVEYOR TO THORNE BARKER		
Part horizontal, part inclined, Length 210 feet		
One No. A-111 chain		
90 f.p.m.	12	192
THORNE BARKER		
Three pockets in parallel for 4-foot wood		
Six cams per pocket		
Cam speed 15 r.p.m.		
Capacity 14 cords per hour	150	2400
WATER SUPPLY TO BARKER		
1000 g.p.m.	20	320
FEED CONVEYOR, INSPECTION AND RETURN CONVEYORS		
Total of five conveyors of various sizes and speeds, all for the Thorne barker	20	320
CONVEYOR FROM BARKER TO WASHERS		
Three No. 111 chains		
Length 130 ft.		
130 f.p.m.	12	192
BARK PRESSING AND CONVEYING TO INCINERATORS	10	160
DRUM WASHER, CONVEYOR TO CHIPPER, DISC BARKERS, SPLITTERS		
Two units, capacity 10 cords per hour each 25 kw. each	50	800
WATER SUPPLY TO DRUM WASHER	10	160
CARTHAGE CHIPPERS		
Two, four knife, 88-inch chippers		
Speed 300 r.p.m.		
Capacity each 10 cords spruce per hour		
90 kw. each	180	2880
CONVEYOR FROM CHIPPERS, ELEVATORS, CONVEYOR TO SCREENS AND THREE RYTHER AND PRINGLE SCREENS		
Speed of screens 425 r.p.m.		
Capacity 18 cords of chips per hour	30	480
LOMBARD CRUSHER	10	160
CHIP CONVEYORS AND ELEVATORS TO CHIP BINS		
1—24-inch belt—158 feet long—75-foot centers, 325 f.p.m.		
1—Elevator—130 feet 10 inches long—30 inches wide—58-foot centers—28-inch buckets—350 f.p.m.		
1—24-inch belt—61 feet long—25-foot centers—325 f.p.m.		
1—Elevator—114 feet 10 inches long—30 inches wide—50-foot centers—28-inch buckets—350 f.p.m.		
1—24-inch belt—297 feet long—142-foot centers—325 f.p.m.		
1—24-inch belt—294 feet long—140-foot centers—325 f.p.m.		
Last two conveyors run over chip bins.		
Capacity of above conveyors 18 cords per hour		
Total power	35	560

Sulphite Mill

24 hours per day operation
Capacity nine tons air dry pulp per hour

ACID PLANT (Four Tower Jennsen System)		
Sulphur storage conveyor (seldom used)	4	96
Sulphur burner	5	12
Gas fan	4	96
Water pump	12	288
Weak acid pump	12	288
Strong acid pump	12	288
Relief liquor pump	2	48
SO_2 recovery pumps	16	384
Refrigerator for acid making (summers only)	150	3600
DIGESTERS		
Filling with acid	25	600
Circulating cooking systems	200	4800
Pumping stock from blow pit to knotters	125	3000
Pumping water for stock dilution at blow-pits and previous to knotters	200	4800
Blowoff gas fans and condensing tower	40	960
KNOTTERS		
7—"Impco" knotters each driven by a 2 h.p. motor		
Speed 26 r.p.m.		
Consistency entering 0.326 per cent o.d.		
Consistency leaving 0.30 per cent o.d.		
Total capacity 240 tons a.d.		
Total load	5	120

* Presented at the Annual Meeting of The Technical Association of the Pulp and Paper Industry, Waldorf-Astoria Hotel, New York, N. Y., February 21-24, 1938.

[1] Chairman TAPPI Subcommittee on Power and Lighting Requirements.

	Average Load in kw.	Kw. Hr. Per Day
FLAT SCREENS		
13 Rows of Harmon flat screens		
Row No. 1—6 screens of 10 plates each		
Row No. 2—6 screens of 10 plates each		
Row No. 3—6 screens of 10 plates each		
Row No. 4—6 screens of 10 plates each		
Row No. 5—5 screens of 10 plates—1 of 8 plates		
Row No. 6—6 screens of 10 plates—1 of 8 plates		
Row No. 7—6 screens of 10 plates—1 of 8 plates		
Row No. 8—2 screens of 10 plates—4 of 12 plates		
Row No. 9—6 screens of 10 plates		
Row No. 10—6 screens of 10 plates		
Row No. 11—6 screens of 10 plates		
Row No. 12—6 screens of 10 plates		
Row No. 13—6 screens of 10 plates		
Cam shaft speed, 166 r.p.m.		
Cams have four points		
Impulses, 664 per min.		
Consistency entering 0.3 per cent o.d.		
Consistency leaving 0.271 per cent b.d.		
Rows 1-9 have plates with three rows of 2½-inch slots, six slots per inch		
Total length of slots per plate 1834 inches		
Rows 10-13 have plates with four rows of 1⅞-inch slots, eight slots per inch		
Total length of slots per plate 2445 inches		
Slots range from 0.006 to 0.010 inch in width		
Screens inclined 0.34 inch to the foot with last cradle level. Shower piper ¾ inch with 32—⅛-inch holes used each cradle		
Pressure 60 pounds		
Each row driven by 1—15 h.p. high torque motor through gear reducer		
Actual load approximately 12 h.p.		
Total load	130	3120
PULP THICKENING		
Cylinder Washers		
6—Washers, 98-inch face by 33⅞ inches diameter		
Backing ⅞-inch copper plate with ¼-inch holes on ⅜-inch centers. Facing wire No. 60 mesh Tyler wire		
Speed 12 r.p.m.		
Belt driven from motor		
Power required approximately 4 h.p.		
Capacity 150 tons a.d. pulp 24 hours		
Consistency entering 0.2 per cent o.d.		
Consistency leaving 3.0 per cent o.d.		
WORM THICKENERS		
5—Worm thickeners, 130-inch face by 37-inch diameter at inlet and tapered to 40 inches dia. at outlet end. Covered with No. 20 cold rolled sheet copper with 1 mm. perforation on 5/64-inch centers.		
Speed 15.5 r.p.m.		
Capacity 100 tons a.d. pulp 24 hours		
Consistency entering 1.5 per cent o.d.		
Consistency leaving 4.5 per cent o.d.		
Are driven by one 25 h.p. high torque motor through speed revolver		
Actual load 15 h.p.		
UNBLEACHED DECKER		
1—"Impco" decker 110-inch face by 42-inch diameter, backing wire 14 mesh, facing wire 60 mesh		
Speed—15¼ r.p.m.		
Capacity 45 tons a.d. pulp 24 hours		
Consistency entering 0.3 per cent o.d.		
Consistency leaving 5.5 per cent o.d.		
Driven by a 5 h.p. belted motor		
Actual load 3 h.p.		
Data on Unbleached Oliver omitted.		
UNBLEACHED OLIVER		
1—Oliver filter, 72-inch face by 64-inch diameter.		
Speed—413 f.p.m.		
Capacity—35 tons per 24 hours.		
Consistency entering—1.5 per cent o.d.		
Consistency leaving—10 per cent o.d.		
Driven by 5 h.p. motor through gear reduction.		
Actual load—3 h.p.		
VACUUM PUMP		
1—Vacuum pump for Oliver filter, 15 h.p.		
Total power required for pulp thickening	40	960
BELLMER CONVEYOR		
1—18-inch belt conveyor, 103 inches long, running in wooden trough		
Speed—413 f.p.m.		
Capacity 10 tons a.d. pulp per hour		
Driven by 30 h.p. motor through gear reducer. Actual load 15 h.p.	10	240
BELLMER BLEACHERS	200	4800
BLEACHING MIXING PLANT	30	720
PUMPING STOCK		
From bleachers to storage or thickening plant	50	1200
PULP THICKENING PLANT		
Dewatering Deckers		
4—"Impco" wood tank deckers		
110-inch face by 42-inch diameter		
Backing wire 14 mesh		
Facing wire 60 mesh		
Capacity 3.3 to 5.2 tons per hour each		
Speed 15¾ r.p.m.		
Consistency entering 15 per cent o.d.		
Consistency leaving 9.0 per cent o.d.		
Actual power 3 h.p. each		
THUNE PRESSES		
4—Thune concentrators		
Speed 31 r.p.m.		
Capacity 2.2 to 3.2 tons per hour each		
Consistency entering 9.0 per cent o.d.		
Consistency leaving 22.0 per cent o.d.		
6—perforated screen plates, 3/32-inch		
Monel metal with approximately 78,000 0.096-inch diameter perforations per press		
Driven by 25 h.p. motor through Link Belt silent chain		
Actual power 15 h.p. each		
Total power for thickening	40	960
PUMPING		
Fresh water for sulphite mill	600	14400

Paper Mill

	Average Load in kw.	Kw. Hr. Per Day
24 hours a day		
170 tons daily production		
5—Paper machines		
Beaters	1200	28800
Jordans	700	16800
Beater chest agitating and stuff pumps	60	1440
Paper machine stuff pumps	60	1440
Paper machines and auxiliaries	1200	28800
Paper machine ventilation	150	3600
Size and alum preparation	30	720
Fresh water to paper mill	400	9600
Save alls	10	240
White water for sprays	150	3600
Broke pulping and lapping	60	1440
FINISHING ROOM		
8 hours a day		
Cutters	40	320
Trimmers	20	160
Packing and shipping	..	.....
Plating	30	240
Embossing	30	240
LIGHTING		
Wood room and pulp mill	50	800
Paper mill	75	1800
Finishing room	75	600

TAPPI Medal Goes to J. N. Stephenson

By unanimous approval of the Executive Committee the 1939 gold medal of the Technical Association of the Pulp and Paper Industry will be presented to J. Newell Stephenson, editor of the *Pulp and Paper Magazine of Canada* and editor of the textbooks on the Manufacture of Pulp and Paper.

Mr. Stephenson was born in New Rochelle, N. Y. in 1882 and is a graduate in chemical engineering (1909) of the Massachusetts Institute of Technology. He was on the faculty of Rose Polytechnic Institute (1910-13) and was one of the organizers of the pulp and paper course at the University of Maine (1913-16). Since 1917 he has been editor of the Pulp and Paper Magazine of Canada and of the above mentioned textbooks.

Since 1922 he has been principal of the Institute of Industrial Arts, Gardenvale, P. Q.

He is chairman of the advisory committee to the Provincial Technical and Paper Making School at Three Rivers, P. Q. and is a member of the Technical Section, Canadian Pulp and Paper Association, the Technical Association of the Pulp and Paper Industry and the Montreal Section of the Society of Chemical Industry.

The TAPPI medal is given to an individual who has made outstanding contributions to the technical advancement of the pulp and paper industry. Mr. Stephenson has contributed much through his editorship of the textbooks, the best accumulation of such information of any industry.

Hinde & Dauch of Canada Reports

The Hinde & Dauch Paper Company of Canada, Ltd., (Controlled by Hinde & Dauch Paper Company)—reports as follows for 1938: Net profit, $427,445, equal to $1.42 each on 299,933 capital shares, against $546,271 or $1.82 a share the year before.

Effect of the Addition of Sodium Salts In Pulping Shortleaf Pine With Neutral Sodium Sulphite Liquor*

By G. H. Chidester[1] and J. N. McGovern[2]

Abstract

Very strong, light-colored, bleachable shortleaf pine pulps were produced by cooking with liquor containing neutral sodium sulphite alone or with the addition of relatively small amounts of sodium bicarbonate, sodium sulphide, or sodium hydroxide to give a pH range from 8 to 11. In general, the results were similar irrespective of the secondary reagent used, the greatest difference noted being the lower bleach requirement of the pulps prepared with the addition of sodium sulphide. This low bleach requirement was apparently obtained at some expense of pulp yield. By way of comparison the same technique was applied to a number of other species, both conifers and hardwoods, and even better pulps were produced than from shortleaf pine.

The possibility of producing bleachable pulps having high strength properties, but with a relatively low yield, by the use of neutral sodium sulphite liquor was pointed out in a previous report *(1)* of the Forest Products Laboratory. The experiments described here were undertaken to explore the possibility of improving the yield, bleach requirement, or strength properties of pulps produced with similar liquor by the use of certain added chemicals, either by a buffering action or by some specific pulping effect.

The use of mixtures of sodium sulphite and other sodium salts, such as the bisulphite, sulphide, sulphate, chloride, thiosulphate, or carbonate, have been variously proposed for pulping. Some have been used commercially to a small extent, such as in the Keebra process and its modifications.

Aronovsky and Gortner have reported the independent effects of sodium carbonate, *(2)* sulphite, *(3)* and sulphide *(4)* among other sodium salts, and the hydroxide *(5)* on the yield and chemical properties of the pulp. They found the sulphite, sulphide, and hydroxide to be the most effective pulping agents. Sodium sulphite yielded more Cross and Bevan cellulose, but less alpha cellulose, than the sulphide or hydroxide, while the sulphide removed more lignin than the other two. They suggest that an optimum *p*H value might be indicated for a high yield of pulp.

In the present experiments sodium hydroxide was added to give *p*H values of approximately 9 and 11 for the cooking liquor. Sodium sulphide was added to give similar values. Sodium bicarbonate was added in the amount of 36 grams per liter to give a *p*H approximately that of the liquor containing only sodium sulphite. The results given in Table I are averages of two or more digestions except for an initial *p*H value of 11.

The digestions were made in a steam-jacketed autoclave lined with stainless steel, and having a volume of approximately 1½ cubic feet. Approximately 10.5 pounds of shortleaf pine (*Pinus echinata*) chips were used with 8 gallons of liquor containing 138 grams per liter sodium sulphite in all instances under conditions which had been established as satisfactory. The digester temperature was brought to 180 deg. C. in 3 hours and held there for 6½ hours. The maximum pressure ranged from 135 to 145 pounds per square inch without relief.

Results and Discussion

Yield and Bleach Requirements of the Pulps

It is apparent from Table I that while all the yields are comparatively low, the highest yields were obtained with the addition of caustic soda and the lowest with the addition of sodium bicarbonate or sodium sulphide. Since several initial *p*H values were attained in various experiments with the two latter

TABLE I.—CONDITIONS AND RESULTS OF PULPING SHORTLEAF PINE WITH SODIUM SULPHITE LIQUOR ALONE AND WITH DIFFERENT ADDED CHEMICALS

Chemical added	Initial pH	Yield of screened pulp, per cent	Screenings, per cent	Blue color of unbleached pulp, Ives parts	Bleach requirement for 85 parts blue, per cent	Strength and other properties at 800 cc. freeness (S. R.): Burst factor, points per pound per ream	Tear factor, grams per pound per ream	Tensile strength, pounds per square inch	Solid fraction	Beating time, minutes	Strength and other properties at 550 cc. freeness (S. R.): Burst factor, points per pound per ream	Tear factor, grams per pound per ream	Tensile strength, pounds per square inch	Solid fraction	Beating time, minutes
None	8.10	42.8	0.3	47	33	1.17	2.20	5,667	0.41	28	1.35	1.72	8,033	0.47	50
NaOH	9.05	43.9	.5	41	35	1.21	2.44	5,800	.44	29	1.41	1.93	7,650	.48	48
NaOH	11.00	44.2	.6	46	35	1.37	2.35	6,500	.44	31	1.52	1.90	8,300	.49	57
Na_2S	9.15	41.3	.5	47	26	1.17	2.83	6,650	.44	28	1.35	2.00	8,050	.47	49
Na_2S	11.10	42.0	.5	46	25	1.25	2.30	7,000	.43	28	1.32	1.90	8,600	.47	51
$NaHCO_3$	8.20	40.8	.7	44	31	1.18	2.63	5,900	.41	38	1.39	2.10	7,930	.46	67

* Presented before the Technical Association of the Pulp and Paper Industry, Green Bay, Wis., Sept. 8-10, 1938.

[1] Member TAPPI, Senior Engineer, Forest Products Laboratory, Forest Sservice, U. S. Department of Agriculture, Madison, Wis. Maintained in cooperation with the University of Wisconsin.

[2] Member TAPPI, Asst. Technologist, Forest Products Laboratory, Madison, Wis.

Acknowledgment is made to P. S. Billington, formerly of the Forest Products Laboratory, for conducting a number of the tests here reported.

reagents without any material improvement in yield, it would appear that pH was not the significant factor influencing yield. On the other hand, during the progress of the digestions, slightly higher pH values were observed for the liquors containing sodium sulphide or sodium bicarbonate than for the other liquors and possibly the lower yields obtained with these reagents were a result of these slightly higher pH values.

It is also apparent that the lowest bleach requirement of the pulps was obtained with the liquors containing sodium sulphide. Yields comparable to those obtained with caustic soda at the higher bleach values could perhaps have been obtained with sodium sulphide with a little less cooking. The bleach requirement of the pulps obtained with sodium bicarbonate, on the other hand, were higher than those obtained with sodium sulphide in spite of the low yield. The results therefore suggest a specific effect of the sodium sulphide in lowering the bleach requirement of the pulps in comparison with the effects without addition of any chemical or with the addition of sodium bicarbonate. In comparison with the effect of the addition of caustic soda the low bleach requirement may have been obtained at the expense of the yield.

The color of the unbleached pulp was fairly light and, except for the product obtained with the addition of sodium hydroxide to give a pH of 9, was very similar in all instances.

Pulp Strength

All of the strength values were relatively high in comparison with sulphite or kraft pulps from the same species. The highest bursting strength values at 800-cc. freeness were obtained with liquor containing caustic soda or sodium sulphide at initial pH values of 11. At 550-cc. freeness the bursting strengths obtained with the addition of caustic soda were somewhat higher than the others.

The highest values for the resistance to tear were obtained with the addition of sodium sulphide *(pH 9)* or bicarbonate. The lowest values were obtained with sodium sulphite alone.

The tensile strengths obtained with the addition of sodium sulphide were generally slightly higher than for the others.

Although slightly lower solid fraction values were obtained at the higher freeness in the case of the straight sodium sulphite pulps and with the addition of sodium bicarbonate, it may be questionable whether the difference is significant. The same is true of the differences in the beating time required to obtain a given freeness.

TABLE II.—RESULTS OF PULPING FIVE CONIFERS AND FOUR HARDWOODS WITH LIQUOR CONTAINING SODIUM SULPHITE AND SODIUM SULPHIDE

Wood	Blue color of unbleached pulp, Ives parts	Bleach requirement for 85 parts blue, per cent	Strength properties at 800 cc. freeness (S. R.): Burst factor, points per pound per ream	Tear factor, grams per pound per ream	Tensile strength, pounds per square inch	Strength properties at 550 cc. freeness (S. R.): Burst factor, points per pound per ream	Tear factor, grams per pound per ream	Tensile strength, pounds per square inch
Slash pine....	42	25	1.40	2.00	7,600	1.66	1.65	10,500
Jack pine.....	46	31	1.60	1.75	10,500	1.77	1.50	12,800
White spruce..	49	23	1.85	1.80	11,000	2.06	1.61	15,000
Douglas fir...	40	25	1.30	2.80	7,000	1.52	2.50	7,000
Eastern hemlock	51	30	1.45	1.80	9,000	1.65	1.50	13,000
Aspen	68	11	.75	1.50	5,800	1.23	1.02	8,800
Black gum....	55	18	.73	1.60	4,100	1.10	1.70	7,000
Yellow birch..	58	17	1.05	1.65	6,300	1.58	1.85	10,500
Hard maple..	65	8	.45	.80	2,700	1.16	1.35	8,000

Comparison of Pulps Obtained From Shortleaf Pine with Those From Other Woods

Although the pulps obtained from shortleaf pine were light-colored, bleachable, and strong, even better qualities were realized with pulps obtained from other finer-fibered conifers or some of the hardwoods. Table II gives the results of cooking five other conifers and four hardwoods with liquor containing the same amount of sodium sulphite as before and, in addition, sodium sulphide to give a pH of approximately 11.

The strengths of the pulps from eastern hemlock, jack pine, and white spruce appear exceptionally high. More remarkable perhaps is the color and strength of the short-fibered hardwood pulps. The maple pulp, for example, was exceptionally light-colored for the species. Yellow birch gave bursting strengths not far below those of an average kraft pulp from pine. It is not an uncommon characteristic of hardwood pulps for the tearing strength to improve with beating.

Many of the hardwood pulps prepared in this way developed tearing strengths at the lower freeness values that were equal or superior to those of the coniferous pulps.

Literature Cited

(1) *Paper Trade J.*, 104, no. 6: 39-42 (Feb. 11, 1937).
(2) Ind. Eng. Chem., 22, no. 9: 941-945 (Sept. 1930).
(3) Ind. Eng. Chem., 25, no. 12: 1349-1354 (Dec. 1933).
(4) Ind. Eng. Chem., 26, no. 1: 61-65 (Jan. 1934).
(5) Ind. Eng. Chem., 26, No. 2: 220-226 (Feb. 1934).

Color Council Sponsors Popular Talks During TAPPI Week

The Inter-Society Color Council, of which the Technical Association of the Pulp and Paper Industry is a body member, at its 8th Annual Meeting will sponsor a group of short popular talks on color at its evening session on February 23. Representatives of the various member bodies will discuss color as it is related to paper, medicine, psychology, fashion, printing, textiles, lighting, photography, etc., in an interesting manner. The meeting will be held at 8 o'clock, Thursday evening, February 23, in the auditorium of the Electrical and Gas Association, 480 Lexington avenue, New York City. Dr. J. A. Van den Akker, research associate, Institute of Paper Chemistry, will represent TAPPI in the talk "Color in Paper". Members of the association are cordially invited to attend this meeting of the council. Further information may be obtained at the TAPPI registration desk in the Roosevelt Hotel.

L. A. Hawkins to Address TAPPI

The principal speaker at the annual luncheon of the Technical Association of the Pulp and Paper Industry to be held at the Roosevelt Hotel, New York, N. Y. on Thursday, February 23 will be L. A. Hawkins, executive engineer of the General Electric Company Research Laboratories, Schenectady, N. Y. Mr. Hawkins has spoken before many groups of a similar nature, and has been highly inspiring. His talk will review the great scientific trends in the engineering and industrial sciences.

Crystal Arrangement and Swelling Properties of Fibers and Ray Cells in Basswood Holocellulose*

By Geo. J. Ritter [1] and R. L. Mitchell [2]

Abstract

In basswood holocellulose the ray cells affect polarized light differently than do the fibers.

The vibration plans for the slow-light component of the polarized light is lengthwise in basswood fiber, the same as the long axis of the fiber crystallites. The vibration plane for the slow-light component of the polarized light is arranged crosswise in the ray cells and the crystal arrangement is also crosswise in the ray cells.

The crystal arrangement shows a definite relation to the longitudinal and the tangential swelling properties of the fibers. The crosswise arrangement of the crystallites in the ray cells, as determined by the method used in this study, is in harmony with the directional swelling properties of the ray cells. The longitudinal swelling of the ray cells and their lack of swelling vertically are contrary to the previously published theory on the subject.

Color effects produced by the outer sleeve of the fiber indicate a crystal arrangement crosswise to the fiber. This arrangement restrains abnormal transverse swelling of the fiber.

A difference between the crystal arrangement in the ray cells as compared with thas in the wood fibers was revealed in a microscopical study of helocellulose from basswood in polarized light. The significance of this difference lies in the fact that it calls for a modification of the present explanation for the directional swelling of wood.

* Presented at the fall meeting of the Technical Association of the Pulp and Paper Industry, Green Bay, Wis., September 8-10, 1938.

[1] Senior Chemist, Forest Products Laboratory, Madison, Wis.
[2] Assistant Chemist.

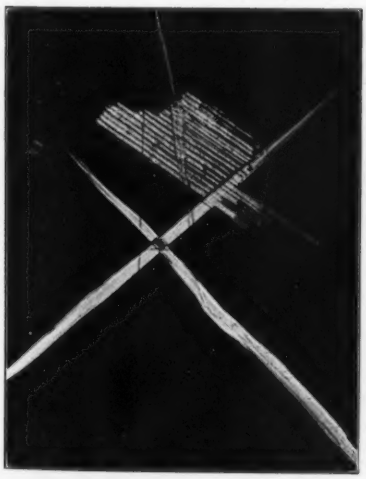


PLATE 1-A.
Fibers crossed at 90 degrees at their maximum-brightness positions; bundle of ray cells at approximately one maximum-brightness position.

PLATE 1-B.
Ray cells crossed at 90 degrees at their maximum-brightness positions.

The predominant crystal arrangement of wood fibers, as obtained from X-ray data *(1)*, is located in the secondary cell wall and is, on the average, approximately lengthwise in the fibers. No data have been published on a subordinate crystal arrangement that occurs in the thin outer layer of the fibers. This subordinate arrangement will be discussed later in the present paper. Microscopical measurements have proved that the swelling caused by the absorption of water manifests itself almost entirely in the crosswise direction of isolated wood fibers *(2)*. Published measurements of wood specimens in their dry and water-soaked condition also indicate that practically the total swelling occurs in the transverse direction of the fibers *(3, 4)*. No previously published results are available on the crystal arrangement or the swelling properties of the ray cells. Accordingly, the crystal arrangement and the swelling properties were determined in order to compare them with the corresponding properties of the fibers.

Holocellulose, which is the lignin-free carbohydrate fraction of wood freed of its extraneous materials, retains the structural arrangement of the fibers and ray cells. The absence of lignin in the material simplifies the manipulation of the various types of fibers on the microscope slide and, in addition, allows a freer passage of the polarized light through the wood components than through a similar wood specimen.

Crystal Properties

On account of its double refractive property, holocellulose resolves a beam of polarized light into a slow and a fast component, vibrating in planes at right angles to one another. When observed in polarized light, the fibers and the ray cells manifest two maximum-brightness positions on the microscope stage at

45 degrees to the Nicol prisms crossed at right angles (Plate 1, A & B). The vibration planes can be related to the cellulose specimen at its maximum-brightness position by noting the color effects produced if a selenite compensator is inserted in the path of the polarized light after it has passed through the cellulose specimen.

Fibers and ray cells appear either blue or yellow in polarized light which passes through a selenite compensator, if they are in their maximum-brightness positions. They appear blue when the vibration planes, which produce the slow-light and the fast-light components in the crystallites of the cellulose specimen, are parallel with the respective vibration planes in the selenite compensator. In contrast, they appear yellow when the vibration planes for the two light components in the crystallites of the cellulose specimen are at right angles to the respective vibration planes in the selenite compensator (Plate II, A and B). The vibration plane of the slow-light component in the selenite compensator is known. Its relative position to that of the blue and the yellow fibers indicates that the slow-light vibration plane of the crystallites is arranged longitudinally in the fibers. The procedure that was used for determining the orientation of the slow-light vibration plane in the fibers was then applied to single isolated ray cells at their maximum-brightness positions. The results indicated that the slow-light vibration plane is oriented crosswise to the long axis of the ray cells.

The orientation of the slow-light vibration plane was thus found to be oriented lengthwise in the fibers and croswise in the ray cells, according to data collected in this study. And since the crystallites are oriented lengthwise to the long fiber axis *(1)*, the slow-light vibration plane is therefore parallel with the long axis of the cellulose crystallites. If it is assumed that the same relationship, which was found between orientation of the slow-light vibration plane and orientation of the crystallites in the fibers holds also for ray cells, then the crystallites are oriented crosswise in the ray cells.

Because of the orientation of their vibration planes for polarized light, the ray cells and the fibers manifest the same color in their crosswise arrangement to one another in the wood. If they are arranged in one maximum-brightness position, they are blue

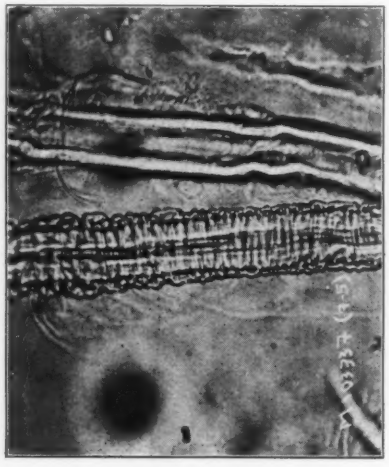


PLATE 1-C.
Thin outer sleeve of fiber showing crosswise striations.

PLATE 1-D.
Fiber ballooned by strong swelling agent.

(Plate II, C); if arranged in the other maximum brightness, they are yellow (Plate II, D). On the other hand, the color of the ray cells and the fibers differs when they are arranged parallel to one another. In one maximum-brightness position the fibers are blue when the ray cells are yellow (Plate II, E). If the microscope stage is rotated 90 degrees, the fibers are yellow and the ray cells are blue.

As previously mentioned, a subordinate crystal arrangement also occurs in the fibers. The thin outer fiber sleeve in which it occurs is composed of fibrils wound crosswise around the secondary cell wall (Plate I, C). In normal fibers the color effects produced by the subordinate crystal arangements are masked by those produced by the predominant crystal arrangement in the secondary cell wall. However, the masking can be overcome sufficiently to make the color effects produced by the subordinate crystal arrangement visible if the fiber is ballooned by a drastic swelling agent (Plate I, D). In the ballooned condition some of the fibrils, which previously covered the secondary wall at the ballooned parts of the fiber, have been pushed on the constrictions, thus making a thicker outer sleeve and concentrating the material within narrow limits. The depth of the subordinate crystal arrangement is then sufficient to produce a blue color which can be observed at the two edges of the yellow coloration produced by the lengthwise crystal arrangement in the secondary cell wall (Plate II F). If the relationship between the arrangement of the slow-light vibration plane and the arrangement of the crystallites previously discussed holds, the crystallites in the outer sleeve are arranged crosswise to the fiber.

So far no experimental data have been collected to determine whether a subordinate-crystal arrangement also occurs in the ray cells.

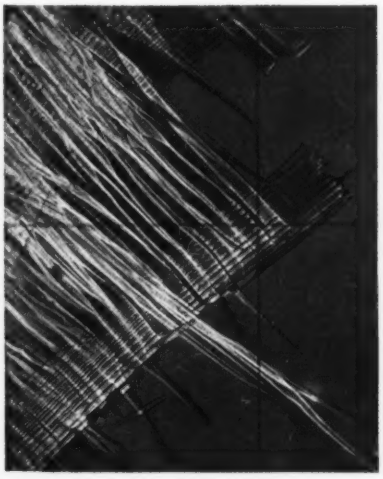
Swelling Properties

Since practically all the swelling caused by the imbibition of water is isolated fibers occurs in the transverse direction *(2)*, the swelling then takes place crosswise to the long axis of the crystallites in the fibers. The swelling can be explained on the basis of the water permeating between the slender cellulose crystallites. If some of the primary-valence chains extend from one to another of the crystallites arrang-

PLATE 2

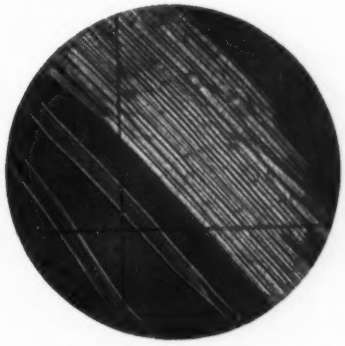
A — Color effects of fibers at maximum-brightness positions.

B — Color effects of ray cells at maximum-brightness positions.



C — Color effect in one maximum-brightness position when fibers and ray cells are arranged crosswise, which is their natural arrangement in wood.

D — Color effect when fibers and ray cells are arranged crosswise, and the microscopic stage is rotated 90 degrees to the maximum-brightness position indicated in "C".



E — Color effect when fibers and ray cells are arranged parallel to one another at one maximum-brightness position; the colors reverse if the stage of the microscope is rotated 90 degrees.

F — The yellow color of the constrictions is produced by the predominant crystal arrangement and the blue at the edges of the constrictions is produced by the subordinate crystal arrangement located in the thin outer sleeve of the fiber.

ed end to end, practically no swelling will occur in the longitudinal direction of the fibers.

If the same explanation used in the preceding paragraph is applied to the swelling of the ray cells, they should swell lengthwise according to their crystal arrangement. Swelling measurements made on isolated ray cells from the basswood holocellulose showed that they do swell between 3 and 4 per cent longitudinally and practically not at all in the vertical direction of the tree. The longitudinal and radial swelling measurements of the ray cells are in close agreement with those of the corresponding wood *(5)*.

The results, showing the lengthwise swelling of the ray cells is contrary to previously published ideas; namely, that the ray cells do not swell lengthwise and, as a result, have a strong restraining effect on the radial swelling of wood *(3, 4)*. They at least have a less restraining effect on the radial swelling of wood than was previously believed. The lack of swelling of the ray cells in the vertical direction of the tree is also contrary to views stating that the ray cells swell vertically and thereby tend to increase the longitudinal dimensions of wood *(2; 4)*.

The crosswise crystal arrangement of the outer fiber sleeve restrains the fibers from swelling beyond normal conditions, as is shown in (Plate I D).

Further work is being done on the crystal arrangement and the swelling properties of holocellulose and wood. The results will appear in a later publication.

Literature Cited

(1) Clark, Geo. L., *Ind. Eng. Chem.* 22: 474 (1930).
(2) Ritter, Geo. J., *Paper Trade J.* 101 (18): 92 (1935).
(3) Koehler, A., Properties and Uses of Wood, p. 56 (1924).
(4) Stamm, A. J., *U.S.D.A. Bull.* 240, p. 54, (1936).
(5) *U.S.D.A. Bull.* 676, p. 12 (1919).

Review Of Paper Industry Literature

Copies of United States Patents can be obtained from the United States Patent Office, Washington, D. C. for 10 cents each. Send currency, not stamps.

Specialties

Rubber-Impregnated Sheet Material. Stephen B. Neiley, assignor to Dewey and Almy Chemical Co. U. S. pat. 2,097,417 (Oct. 26, 1937).—An impregnated sheet suitable for an artificial leather base consists of a single fibrous web having a capillary absorptive structure having a nonuniform distribution of rubber therein from surface to surface, the amount of rubber present at one surface of the sheet being substantially greater than at the opposite surface and the web being free peeling. The surface of the web having a reduced rubber content is open and the rubber is present in amount to bind the fibers but not in sufficient amount or prevent adherence of a coating material to that surface of the sheet whereby to form a coating-receptive surface. (Cl. 91-68). —A.P.-C.

Wadding. Charles A. Fourness, assignor to Paper Patents Co. U. S. pat. 2,106,246 (Jan. 25, 1938).—The product consists of a number of plies of creped tissue paper which are superposed one upon another to form a multi-ply sheet of the desired thickness. The creping in the superposed sheets all extends in the same direction so that the wadding has a definite grain which is substantially parallel throughout the wadding. The superposed creped tissue sheets are united by means of small embossed portions which are distributed substantially uniformly over the area of the wadding. The embossed portions are of relatively elongated but very narrow proportions so that they approximate short lines of embossing. (Cl. 154-54).—A.P.-C.

Transparent and Moistureproof Cellulosic Material. Thereon G. Finzel and Donald E. Drew, assignors to E. I. du Pont de Nemours and Co. U. S. pats. 2,108,804 to 2,108,806 (Feb. 22, 1938).—*No. 2,108,804*—A highly calendered paper is impregnated with a moistureproofing and transparentizing lacquer containing solids such as paraffin and ester gum which possess the hot-flow property, and the solvents, such as naphtha and alcohol, are evaporated from the treated paper at a temperature sufficient to cause the solids to hot-flow and fill the voids when the composition contains a minor proportion of solvents. *No. 2,108,805*—A transparent wrapping tissue is prepared by calendering a thin porous sulphite tissue, passing it through an 8 to 12 per cent solution of paraffin in toluene at a temperature of about 35° to 50°C., removing excess solution, heating to evaporate the toluene paraffin and melt the paraffin associated with the paper, then treating with a lacquer the solids of which comprise 62.5% of half-second nitrocellulose and 37.5% of tritolyl phosphate with a solvent such as ethyl acetate and ethanol, and heating to remove the lacquer solvent. *No. 2,108,806* —Paper is transparentized by impregnating with a liquid composition containing a water-soluble soap such as sodium stearate or ammonium or triethanolamine oleate in a liquid vehicle such as water and alcohol to provide a soap content of 0.1 to 10% in the final product, removing the liquid vehicle, and then impregnating the paper with a transparentizing composition such as a wax. (Cl. 91-70, 91-68, 91-68, resp.).—A.P.-C.

Stabilization of Latex in Wet Impregnated Webs. Izador J. Novak, assignor to Raybestos-Manhattan, Inc. U. S. pat. 2,101,089 (Dec. 7, 1937). —A wet web is impregnated by passing through an aqueous latex solution containing (1) stabilizers (suitably alkali metal salts of weak polybasic acids, preferably sodium silicate in a proportion less than approximately 15% by weight of the latex solids); (2) anti-foaming agents (suitably, esters of aliphatic alcohols having 3 to 6 carbon atoms with polybasic organic acids which have long hydrocarbon chains, preferably in presence of solvents such as hydrocarbons); (3) anti-oxidants (suitably, 2 to 4 per cent of "Dispersed Antox" or "Dispersed Neozone," calculated on the rubber solids). (Cl. 18-50).—A.P.-C.

Waxed Paper Wrappers for Loaves of Bread, Etc. Carl S. Hamersley and Sumner C. Fairbanks, U. S. pat. 2,099,301 (Nov. 16, 1937).—A waxed paper wrapper has along certain margins a coating of bonding material such as ester gum or copal, etc., which is unreactive toward wax and of no appreciable normal viscidity, which has a greater viscosity

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than wax, is substantially tacky at the melting temperature of wax, and serves for sealing. (Cl. 229-87). —A.P.-C.

Sheet Abrasive Material. Fritz Simon, assignor to Norddeutsche Schleifmittel-Industrie. G. m. b. H. U. S. pat. 2,093,852 (Sept. 2, 1937).—A sheet material such as paper is passed through a bath of concentrated sulphuric acid and then through a bath of glycerin and grape or starch sugar, then coated with a binding agent including drying oils and with resin, copal or the like; an abrasive is then applied to the sheet and it is heated to a high temperature. (Cl. 51-278).—A.P.-C.

Paper Manufacture. George A. Richter, assignor to Brown Company. U. S. pat. 2,103,640 (Dec. 28, 1937).—A porous paper is impregnated with a solution of cellulose acetate under such conditions that only about 0.5 to 2% of cellulose acetate is retained, based on the weight of dry fiber. Softeners (such as glycerin) and plasticizers (such as tricresyl phosphate, dibutyl phthalate, etc.) may be added to the cellulose acetate solution. Paper treated in this manner retains its absorbency and acquires a high wet strength. (Cl. 91-68).—A.P.-C.

Composite Fabrics Including Paper and Rubber. William W. Rowe, assignor to Paper Service Company. U. S. pat. 2,101,874 (Dec. 14, 1937).—A composite fabric suitable for making heavy duty bags, etc., comprises at least 2 layers of paper between which are cementitious layers including a layer of rubber deposited from latex and at least one layer of bituminous material between a paper face and the rubber layer. (Cl. 154-50).—A.P.-C.

Apparatus for Making Saturated, Sized, Filled, or Coated Paper or Fiberboard. Izador J. Novak, assignor to Raybestos-Manhattan, Inc. U. S. pat. 2,104,052 (Jan. 4, 1938).—After forming on the paper machine, but before drying, the sheet is supported on a porous carrier which carries it into contact with or through a body of saturating, sizing, filling or coating material. (Cl. 92-40).—A.P.-C.

Laminated Sheet and Process of Making the Same. John A. Kenney, assignor to The Barrett Company. U. S. pat. 2,104,081 (Jan. 4, 1938).—A hard resin of the coumarone-indene type is dispersed in an aqueous solution of sodium silicate. The dispersion is added to fibrous pulp and is precipitated on to the fibers (e.g., by means of alum) in solid substantially non-adhesive condition. The pulp is formed into a sheet which is subjected to pressure at a temperature considerably above the melting-point of the resin. (C1. 92-21).—A.P.-C.

Heat Insulating Tape. Samuel Hughes, assignor to Raybestos-Manhattan, Inc. U. S. pat. 2,094,919 (Oct. 5, 1937).—An insulating tape adapted to be wrapped in helical fashion around a pipe, conduit or container, comprises an elongated core of relatively flat asbestos paper, asbestos roving helically wrapped around the core, and a fibrous sheath covering the core and roving. (Cl. 154-44).—A.P.-C.

Paper. Herbert A. Winkelmann, assignor to Marbon Corp. U. S. pat. 2,111,058 (March 15, 1938).—A heat-sealable flexible sheet material free from pin holes is obtained by impregnating paper with a mixture including a rubber hydrochloride, magnesium oxide and a volatile solvent for the rubber hydrochloride, evaporating the solvent, and contacting the surface of the impregnated sheet with a highly polished hard surface at a temperature and pressure sufficient to flow the rubber hydrochloride. (Cl. 91-70).—A.P.-C.

Manufacture of Corrugated Paper. Charles Quincy Ives, assignor to Sherman Paper Products Corporation. U. S. pat. 2,104,996 (Jan. 11, 1938).—A sheet of paper having a substantial leather content (preferably about 10 to 50 per cent) is passed between one or more pairs of corrugating rolls heated to a sufficiently elevated temperature (about 300° to 400°F.) to cause an incipient fusion of the leather fiber content of the sheet. (Cl. 92-70).—A.P.-C.

Manufacture of Metal Coated Paper. Bert C. Miller, assignor to Bert C. Miller Inc. U. S. pat 2,105,440 (Jan. 11, 1938).—A thin layer of metal such as copper is electrodeposited on a moving cathode such as a rotating drum and is then stripped from the latter after pressure contact with a sheet of stronger material such as paper with which the metal is united by an adhesive. Various details of apparatus and operation are described. (Cl. 204-6). —A.P.-C.

Ohio TAPPI Meets With Superintendents

The Ohio Section of the Technical Association of the Pulp and Paper Industry met jointly with the Miami Valley Division of the American Pulp and Paper Mill Superintendents Association at the Anthony Wayne Hotel, Hamilton, Ohio, Saturday evening, February 4, 1939. Approximately ninety members and friends of both organizations were present at the dinner and meeting.

H. H. Latimer, chairman of the Ohio Section, announced that this meeting marked the end of the fiscal year for the technical men, and called a business meeting for the election of officers. The following men were elected for the coming year: Chairman, K. P. Geohegan, Aetna Paper Company, Dayton, Ohio; First Vice-Chairman, H. W. Laymon, Mead Corp., Chillicothe, Ohio; Second Vice-Chairman, Val Friedrich, Beckett Paper Company, Hamilton, Ohio; Secretary-Treasurer, J. E. Burdsall, Crystal Tissue Company, Middleton, Ohio; Executive Committee: George Harvey, Gardner Richardson Co., Middletown, Ohio; O. P. Gephart, Miamisburg Paper Company, Miamisburg, Ohio; H. H. Harrison, Crystal Tissue Company, Middletown, Ohio; Wm. Beckett, Beckett Paper Company, Hamilton, Ohio; H. H. Latimer, Champion Paper and Fibre Company, Hamilton, Ohio; Clarke Marion, Champion Paper and Fibre Company, Hamilton, Ohio.

Walter Sooy, Chairman of the Miami Valley Superintendents Division was asked to introduce the speaker. Sooy presented J. R. Simpson, Champion Paper and Fibre Company. Mr. Simpson was born in Scotland and later came to this country and has spent many years as a paper-maker here. Recently his work took him back to England and Scotland. While there he visited many mills and was able to draw an interesting comparison of paper-making in those countries and the United States. He spoke informally about those things which had been interesting to him as a paper-maker, the type machines they have, their quality standards, raw materials, the combatting of very high humidities in drying and their technical methods. His talk was well received. During a discussion he answered many questions regarding both paper-making and the life and customs of the people of those countries.

Imports of Paper and Paper Stock

Giving Manifests of New York, Boston, Philadelphia and Other Ports of Newsprint, Wrapping, Writing, Coated, Blotting, Tissue, Strawboard, Wallboard, Cigarette Papers, Sulphite, Kraft and Ground Wood Pulp.

NEW YORK IMPORTS

WEEK ENDING FEBRUARY 4, 1939

SUMMARY

Cigarette paper	576 cs.
Wall paper	2 bls.
Paper hangings	13 bls., 1 cs.
Painted paper	1 cs.
Newsprint	6,423 rolls
Printing paper	39 cs.
Wrapping paper	5 cs.
Filter mass	4 cs.
Filter paper	16 cs.
Drawing paper	1 cs.
Surface baryta coated paper	52 crates, 27 cs.
Surface coated paper	48 cs.
Metal covered paper	9 cs.
Photo paper	1 cs.
Basic paper	18 cs.
Decalcomanias	25 cs.
Transfer pictures	14 cs.
Transparent paper	4 cs.
Tissue paper	27 cs.
Colored paper	9 cs.
Fancy paper	1 cs.
Writing paper	3 cs.
Glazed paper	1 cs.
Paper tubes	110 ctns., 78 cs.
Miscellaneous paper	2,272 rolls, 52 bls., 51 cs.

CIGARETTE PAPER

Champagne Paper Corp., *De. Grasse,* Havre, 497 cs.
De Mauduit Paper Corp., *De. Grasse,* Havre, 3 cs.
Clark Fruiterer Co., *De Grasse,* Havre, 76 cs.

WALLPAPER

C. Asche, *Black Condor,* Antwerp, 1 ble.
Rhoner Gehrig & Co., *Konigsberg,* Bremen, 1 ble.

PAPER HANGINGS

W. H. S. Lloyd & Co., *American Trader,* London, 1 cs., 13 bls.

PAINTED PAPER

A. L. Diament & Co., *De Grasse,* Havre, 1 cs.

NEWSPRINT

Jay Madden Corp., *Konigsberg,* Finland, 197 rolls.
Perkins Goodwin & Co., *Konigsberg,* Hamburg, 216 rolls.
N. Y. Evening Journal, *Markland,* Liverpool, N. S., 626 rolls.
N. Y. Tribune, *Markland,* Liverpool, N. S., 1281 rolls.
World Telegram, *Markland,* Liverpool, N. S., 593 rolls.
Brooklyn Daily Eagle, *Markland,* Liverpool, N. S., 591 rolls.
Herald Statesman, Inc., *Markland,* Liverpool, N. S., 42 rolls.
Clinton Paper Corp., *Markland,* Liverpool, N. S., 148 rolls.
Nolan Bowmall & Co., Inc., *Markland,* Liverpool, N. S., 191 rolls.
N. Y. Evening Journal, *Svaneholm,* Kotka, 217 rolls.
Lunham & Reeve, Inc., *Svaneholm,* Kotka, 222 rolls.
Jay Madden Corp., *Svaneholm,* Kotka, 172 rolls.
Perkins Goodwin & Co., *Deutschland,* Hamburg, 203 rolls.
Jay Madden Corp., *Deutschland,* Finland, 299 rolls.
Jay Madden Corp., *Mormacsea,* Kotka, 386 rolls.
Jay Madden Corp., *Hamburg,* Finland, 564 rolls.
Jay Madden Corp., *Mathilda Thorden,* Helsingfors, 258 rolls.
N. Y. Evening Journal, *Mathilda Thorden,* Helsingfors, 217 rolls.

PRINTING PAPER

The Senefelder Co., *Deutschland,* Hamburg, 14 cs.
L. A. Consmiller, *Bremen,* Bremen, 25 cs.

WRAPPING PAPER

Standard Products Corp., *Black Condor,* Antwerp, 5 cs.

FILTER MASS

A. Giese & Son, *Hamburg,* Hamburg, 4 cs.

FILTER PAPER

H. Reeve Angel & Co., Inc., *Aurania,* London, 4 cs.
——, *Deutschland,* Hamburg, 12 cs.

DRAWING PAPER

E. H. & A. C. Friedrich, *American Trader,* London, 1 cs.

SURFACE BARYTA COATED PAPER

L. A. Consmiller, *Konigsberg,* Bremen, 15 cs.
Globe Shipping Co., *Hamburg,* Hamburg, 52 crates.
L. A. Consmiller, *Bremen,* Bremen, 10 cs.
Dingelstedt & Co., *Gerolstein,* Antwerp, 2 cs.

SURFACE COATED PAPER

Gevaert Co., of America, *Black Eagle,* Antwerp, 48 cs.

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K. Pauli Co., *Deutschland,* Bremen, 9 cs.

PHOTO PAPER

Medo Photo-Supply Co., *Aurania,* London, 1 cs.

BASIC PAPER

Globe Shipping Co., *Bremen,* Bremen, 10 cs.
Steffens Jones Co., *Gerolstein,* Antwerp, 8 cs.

DECALCOMANIAS

Sellers Transportation Co., *Bremen,* Bremen, 23 cs.
Phoenix Shipping Co., *Bremen,* Bremen, 2 cs.

TRANSFER PICTURES

Rhoner Gehrig & Co., *Bremen,* Bremen, 14 cs.

TRANSPARENT PAPER

M. J. Corbett & Co., *Noordam,* Rotterdam, 4 cs.

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Van Oppen & Co., *Pr. Monroe,* Genoa, 26 cs., (uncoated).
W. J. Byrnes & Co., *American Trader,* London, 1 cs., (coated).

COLORED PAPER

D. C. Andrews & Co., *Konigsberg,* Bremen, 6 cs.
J. W. Hampton, Jr., & Co., *Black Eagle,* Antwerp, 3 cs.

FANCY PAPER

C. A. Haynes & Co., *Georgic,* Southampton, 1 cs.

WRITING PAPER

H. W. Robinson & Co., *Hamburg,* Hamburg, 1 cs.
——, *Deutschland,* Hamburg, 2 cs.

GLAZED PAPER

American Express Co., *H. Jaspar,* Antwerp, 1 cs.

PAPER TUBES

——, *Deutschland,* Bremen, 110 ctns, 8 cs.
——, *Hamburg,* Hamburg, 70 cs.

MISCELLANEOUS PAPER

Hormann Schutte & Co., Inc., *Pr. Monroe,* Genoa, 10 cs.
American Express Co., *Deutschland,* Hamburg, 1 cs.
The Borregaard Co., Inc., *Gripsholm,* Gothenburg, 2,272 rolls, 52 bls.
Remington Rand, Inc., *Azumasan Maru,* Kobe, 7 cs.
Japan Paper Co., *Azumasan Maru,* Kobe, 11 cs.
——, *Normandie,* Havre, 13 cs.
A. Schroeder Importing Co., *Tai Yang,* Hong Kong, 5 cs.
American Express Co., *De Grasse,* Havre, 4 cs.

RAGS, BAGGINGS, ETC.

Royal Manfg. Co., *Black Condor,* Antwerp, 42 bls. cotton waste.
F. J. Fawcett, *Black Condor,* Antwerp, 62 bls. flax waste.
Castle & Overton, Inc., *Black Condor,* Rotterdam, 87 bls. bagging.
Irving Trust Co., *Pr. Monroe,* Bombay, 100 bls. cotton waste.
Bank of The Manhattan Co., *Pr. Monroe,* Bombay, 300 bls. cotton waste.
Padawer & Co., *Pr. Monroe,* Bombay, 11 bls. cotton waste.
W. J. Green, *Black Eagle,* Antwerp, 24 bls. rags.
Manufacturers Trust Co., *Black Eagle,* Antwerp, 17 bls. rags.
Padawer & Co., *Vito,* Bombay, 100 bls. cotton waste.
Manufacturers Trust Co., *Vito,* Bombay, 100 bls. cotton waste.
D. S. Stern Corp., *Vito,* Bombay, 100 bls. cotton waste.
——, *Vito,* Bombay, 325 bls. cotton waste.
Castle & Overton, Inc., *Vito,* Bombay, 96 bls. rags.
Chase National Bank, *Cameronia,* Glasgow, 89 bls. bagging
——, *Cameronia,* Glasgow, 50 bls. paper stock.
——, *American Trader,* London, 46 bls. old twines.
Manufacturers Trust Co., *Addania,* Liverpool, 14 bls. rags.

OLD ROPE

W. Steck & Co., *Black Hawk,* Rotterdam, 42 coils.
——, *New York City,* Bristol, 45 coils.

CHINA CLAY

Whitaker Clark & Daniels, Inc., *Noordam*, Rotterdam, 130 bags.

WOOD PULP

Gottesman & Co., Inc., *Magna*, Sweden, 13,200 bls. wood pulp.
M. Sone, *Alberta*, Trieste, 1,040 bls. wood pulp.
Pagel Horton & Co., Inc., *Svaneholm*, Gothenburg, 1,500 bls. sulphite.
Pulp Sales Corp., *Svaneholm*, Viipuri, 1,501 bls. sulphate.
J. Andersen & Co., *Svaneholm*, Gothenburg, 1,750 bls. sulphite.
Castle & Overton, Inc., *Deutschland*, Hamburg, 130 bls. wood pulp, 26 tons.
Bank of N. Y. Trust Co., *Deutschland*, Hamburg, 160 bls. wood pulp, 32 tons.
———, *Black Condor*, Rotterdam, 127 bls. wood pulp, 26 tons.
———, *Konigsberg*, Bremen, 64 bls. wood pulp.
Castle & Overton, Inc., *Konigsberg*, Hamburg, 4,300 bls. wood pulp, 860 tons.
Pulp Sales Corp., *Ragnhildsholm*, Viipuri, 1,270 bls. sulphate.
Pulp Sales Corp., *Ragnhildsholm*, Rauma, 400 bls. sulphite.
Castle & Overton, Inc., *Ragnhildsholm*, Stockholm, 1,800 bls. sulphite, 304 tons.
Castle & Overton, Inc., *Hamburg*, Hamburg, 525 bls. wood pulp, 105 tons.
Pulp Sales Corp., *Mathilda Thorden*, Helsingfors, 3,104 bls. sulphate, 400 bls. sulphite.
Perkins Goodwin & Co., *Idefjord*, Drammen, 125 bls. sulphite, 25 tons.

WOOD PULP BOARDS

———, *Svaneholm*, Viipuri, 176 rolls.
Jay Madden Corp., *Mormacsea*, Kotka, 111 rolls, 47 tons.
W. Bersch, *Hamburg*, Hamburg, 175 bls.

PORTLAND IMPORTS

WEEK ENDING FEBRUARY 4, 1939

Pulp Sales Corp., *Mormacsea*, Helsingfors, 1,222 bls. sulphite, 247 tons.
Pulp Sales Corp., *Mormacsea*, Kotka, 3,212 bls. sulphate, 632 tons; 4,332 bls. sulphite, 866 tons; 187 bls. woodpulp, 37 tons.

BOSTON IMPORTS

WEEK ENDING FEBRUARY 4, 1939

Parsons & Whittemore, Inc., *Tautmila*, ———, 2,500 bls. wood pulp.
M. Sone, *Tautmila*, Riga, 1,524 bls. wood pulp.
Bank of The Manhattan Co., *Pr. Monroe*, Bombay, 50 bls. cotton waste.
Chemical Bank Trust Co., *Pr. Monroe*, Bombay, 66 bls. cotton waste.
———, *Pr. Monroe*, Alexandria, 74 bls. rags.
American Express Co., *Konigsberg*, Hamburg, 60 bls. straw paper.
Castle & Overton, Inc., *Konigsberg*, Hamburg, 315 bls. wood pulp, 63 tons.
———, *Konigsberg*, Hamburg, 7 bls. rags.
Jay Madden Corp., *Konigsberg*, Finland, 362 rolls newsprint.
E. J. Keller Co., Inc., *Black Eagle*, ———, 325 bls. rags, 62 bls. bagging.
———, *Black Eagle*, Antwerp, 122 bls. rags, 159 bls. bagging scrap.
———, *Nozima Maru*, Kobe, 7 cs. paper.
D. C. Andrews & Co., *Andania*, Liverpool, 4 bls. bowl, paper.
G. F. Malcolm, Inc., *Andania*, Liverpool, 3 cs. tissue paper.
F. S. Webster, Co., *Andania*, Liverpool, 13 cs. tissue paper.
———, *Andania*, Liverpool, 38 bls. thread waste, 30 bls. rags.
Pulp Sales Corp., *Mormacsea*, Helsingfors, 130 bls. sulphite, 26 tons; 806 bls. mechanically ground pulp, 161 tons.
Jay Madden Corp., *Mormacsea*, Helsingfors, 173 rolls newsprint.
———, *Mormacsea*, Stockholm, 1,200 bls. sulphite, 203 tons.
J. Andersen & Co., *Mormacsea*, Stockholm, 600 bls. sulphite, 101 tons.
Pulp Sales Corp., *Mormacsea*, Kotka, 2,924 bls. sulphite, 538 tons; 1,067 bls. sulphate, 191 tons; 294 bls. wood pulp, 58 tons.
Castle & Overton, Inc., *Mormacsea*, Kotka, 2,175 bls. wood pulp, 421 tons.
———, *Alberta*, Trieste, 500 bags ground hide glue; 954 bls. wood pulp.
E. J. Keller Co., Inc., *Collamer*, ———, 1,006 bls. paper stock, 72 bls. bagging.

PHILADELPHIA IMPORTS

WEEK ENDING FEBRUARY 4, 1939

E. J. Keller Co., Inc., *Black Condor*, ———, 117 bls. bagging.
Continental Bank Trust Co., *Black Condor*, Rotterdam, 59 bls. paper stock.
Pulp Sales Corp., *Svaneholm*, Viipuri, 1,605 bls. sulphite.
Public Ledger, Inc., *Svaneholm*, Kotka, 446 rolls newsprint.
J. W. Hampton, Jr., & Co., *Svaneholm*, Kotka, 160 rolls newsprint.
Wilkinson Bros., & Co., Inc., *Svaneholm*, Kotka, 147 rolls newsprint.
Jay Madden Corp., *Svaneholm*, Kotka, 227 rolls newsprint.
The Borregaard Co., Inc., *Svaneholm*, Gothenburg, 138 rolls paper.
Nolan Bowmall & Co., Inc., *Svaneholm*, Gothenburg, 50 rolls newsprint.
F. Whitaker Co., *Svaneholm*, Gothenburg, 6 bls. rags.
J. M. Hagy Waste Works, *Norden*, Kobe, 30 bls. rags.
National Waste Co., *Norden*, Kobe, 50 bls. rags.
Leipheimer, Inc., *Norden*, Kobe, 5 bls. rags.

BALTIMORE IMPORTS

WEEK ENDING FEBRUARY 4, 1939

Gottesman & Co., Inc., *Consul Corfitzon*, Sweden, 1,000 bls. wood pulp.
Washington Post, *Markland*, Liverpool, N.S., 1,349 rolls newsprint.
Jay Madden Corp., *Svaneholm*, Kotka, 1,149 rolls newsprint.
The Borregaard Co., Inc., *Svaneholm*, Gothenburg, 1,000 bls. wood pulp; 106 bls. 248 rolls, wrapping paper.
Bulkley Dunton Pulp Co., Inc., *Svaneholm*, ———, 254 bls. wood pulp.
Gottesman & Co., Inc., *Extavia*, Constanza, 2,800 bls. bleached pulp, 565 tons.
Bankers Trust Co., *Alberta*, Trieste, 842 bls. wood pulp.
Goldman Sachs & Co., *Alberta*, Trieste, 418 bls. wood pulp.
Lagerloef Trading Co., *Mathilda Thorden*, Helsingfors, 520 bls. dry mechanical pulp.
Pulp Sales Corp., *Mathilda Thorden*, Helsingfors, 520 bls. dry mechanical pulp; 217 bls. sulphate; 1,050 bls. sulphite.
Jay Madden Corp., *Mathilda Thorden*, Helsingfors, 1,834 rolls newsprint.
Price & Pierce, Ltd., *Consul Corfitzon*, ———, 1,800 bls. unbleached sulphite.

NEW ORLEANS IMPORTS

WEEK ENDING FEBRUARY 4, 1939

M. Sone, *Stureholm*, Hernosand, 2,100 bls. wood pulp.
M. Sone, *Wasgeneald*, Hamburg, 512 bls. wood pulp.

NORFOLK IMPORTS

WEEK ENDING FEBRUARY 4, 1939

Gottesman & Co., Inc., *Consul Corfitzon*, Sweden, 19,360 bls. wood pulp.
Castle & Overton, Inc., *Vito*, Bombay, 140 bls. rags.
J. W. Higman Co., *New York City*, Fowey, 358 tons, 19 cwt china clay.
Paper Makers Importing Co., *New York City*, Fowey, 887 tons, 11 cwt china clay.
Pulp Sales Corp., *Mathilda Thorden*, Helsingfors, 4,393 bls. sulphite; 476 bls. sulphate; 1,340 bls. wood pulp.
Castle & Overton, Inc., *Mathilda Thorden*, Helsingfors, 1,209 bls. sulphite.
W. M. Stone & Co., *Mathilda Thorden*, Helsingfors, 274 rolls, 282 bls. newsprint.
Old Dominion Paper Co., *Mathilda Thorden*, Helsingfors, 119 rolls newsprint.

MOBILE IMPORTS

WEEK ENDING FEBRUARY 4, 1939

Mobile Paper Mills Co., *Konigsberg*, Bremen, 300 bls. sulphite.

Increasing Condenser Tube Life

A pamphlet just issued by the Condenser Service & Engineering Company, 310 Twelfth street, Hoboken, N. J., describes its method for extending the life of condenser tubes by its patented air and erosion eliminator. It is stated that each eliminator is designed and fitted to the particular condenser it is to serve; that it removes the cause of tube-end destruction and stops electrolysis, thereby prolonging condenser tube life many times.

New York Market Review

Office of the PAPER TRADE JOURNAL,
Wednesday, February 8, 1939.

Increased sales volume in some grades of paper are reported by many manufacturers' representatives, jobbers, and general paper merchants for the current week. Opinion in the wholesale market on the trade prospect in the near future is moderately optimistic and a fair increase in volume during the current month is looked for. In view of the wide consumer demand for paper and paper products, this is a reasonable expectation supported by the slow but steady rise in general business activity now occurring.

The index of general business activity for the week ended January 28 is up to 92.3 per cent, from 91.6 per cent for the previous week, compared with 82.2 per cent for the corresponding week last year. The production ratio of over 190 paper mills for the like period stood at 79.8 per cent, compared with 68.1 per cent for the corresponding period last year. Paper board production for the week ended January 28 was 68.0 per cent, compared with 60.0 per cent for the corresponding week last year.

The newsprint situation reflects little change and this market is relatively quiet with a gradual improvement expected to continue as general business activity increases. Prevailing prices are expected to be continued.

Reports received from some quarters in the wholesale trade indicate that consumer demand for some grades of paper continues to improve. Increased orders for some grades of sulphite papers, including bonds, and some groundwood papers have been reported this week. Production and orders in kraft papers which began to move sharply upward about the middle of last month, continues and the current trend is interpreted in some quarters of the trade as forecasting a high level in both production and orders for the first quarter of this year. Prices remain unchanged.

Mechanical Pulp

No change in the market situation in mechanical pulp has been reported for this week. This market is relatively quiet, with no indication of any change in prices or demand apparent at this date.

Chemical Pulp

The demand for chemical pulp continues light and no important change has occurred during the week. Reports of sales of small lots of domestic sulphite at around $40 per ton are current in the trade but are not considered as of any particular significance. Despite unconfirmed reports to the contrary, there has apparently been little tonnage of southern kraft pulp sold under $30 per ton or even at that low figure. No change in the prices of any grade of European, Canadian or domestic pulp has been reported this week.

Old Rope and Bagging

More or less steady buying is reported in old rope for this week, although prices continue firm and unchanged. A little more activity is reported in old bagging with prices a little lower, with foreign No. 1 gunny currently quoted at 1.75 to 1.90, and domestic gunny at 1.70 to 1.80. Bright bagging is also lower and currently quoted at 1.60 to 1.70. Light wool tares are down to 1.60 to 1.70 this week.

Rags

With the exception of roofing rags which are in active demand, the demand for other grades of new and old domestic rags continues light. A reduction in the price of No. 1 roofing rags down to 1.10 to 1.15, and No. 2 down to .90 to .95 is currently quoted. Old miscellaneous thirds and blues are also lower and currently priced at 1.15 to 1.20. The foreign rag market is inactive and quotations are nominal.

Old Waste Paper

Little change in the general demand for old waste paper has been reported this week, but several price changs have occurred. Solid flat book is down to .55 to .60, white envelope cuttings are off to 2.25 to 2.40, and strictly folded news is up to .35 to .40 for this week.

Twine

No important change in prices or demand has been reported in the twine market for this week. A little improvement is noted in some grades but prices remain unchanged and firm at prevailing quotations.

New SKF Catalog

A catalog describing the new double row cylindrical roller bearing developed by SKF Industries, Inc., Philadelphia, is just off the press.

This bearing has been developed primarily for the machine tool industry, but can be used successfully in other fields. Its advantages are a light section giving a large bore and a small outside diameter—desirable when space is at a premium.

The large number of cylindrical rollers maintained in a staggered position by the bronze cage permits high radial capacity with extreme rigidity and smoothness. Made in a range of sizes from 1½ inches to 14 inches, this bearing can be supplied for shafts up to 18 inches in diameter.

Syracuse Alumni To Meet

Graduates of Syracuse University attending the TAPPI meeting will have a get-together at the Roosevelt Hotel, Wednesday, February 22, from 4 to 7 P.M.

Miscellaneous Markets

Office of the PAPER TRADE JOURNAL,
Wednesday, February 8, 1939.

BLANC FIXE—Prices on blanc fixe continue firm and conform to prevailing market levels. The pulp is quoted at from $42.50 to $45 per ton; the powder is offered at from 3½ to 3¾ cents per pound, in barrels, at works.

BLEACHING POWDER—Quotations on bleaching powder are firm and conform to prevailing market prices. Bleaching powder is quoted at from $2 to $2.25 per 100 pounds, in drums, at works.

CASEIN—The demand for casein continues moderate for the week. Standard domestic ground casein, 20-30 mesh, is quoted at from 8½ to 9 cents per pound; 80-100 mesh at from 9 to 9½ cents per pound; all prices in bags, car lot quantities.

CAUSTIC SODA—Prices on caustic soda continue firm at prevailing market levels. Solid caustic soda is quoted at from $2.10 to $2.30 per 100 pounds; flake and ground at from $2.50 to $2.70 per 100 pounds, in drums, at works.

CHINA CLAY—Quotations on china clay are unchanged at prevailing market prices. Domestic filler clay is quoted at from $6.50 to $12 per ton; coating clay at from $11 to $22 per ton, at mines. Imported clay is offered at from $14.50 to $25 per ton, ship side.

CHLORINE—Prices on chlorine are unchanged and conform to prevailing market quotations. Chlorine is quoted at $2 per 100 pounds, in single-unit tank cars, f.o.b., works.

ROSIN—The demand for rosin is reported fair for this week. "G" gum rosin is quoted at $5; "F" wood rosin at $4.25 per 280 pounds, gross weight, in barrels, at Savannah. Seventy per cent gum rosin size is quoted at $2.75 per 100 pounds, f.o.b., shipping point.

SALT CAKE—Quotations on salt cake continue firm and conform to prevailing market prices. Prices range at from $12 to $13.50 per ton; chrome salt cake at from $11 to $12 per ton, f.o.b., shipping point. Imported salt cake is quoted at from $14.50 to $15 per ton, Gulf or Atlantic Seaboard, on dock.

SODA ASH—Prices on soda ash are firm and unchanged at prevailing market quotations. Prices on soda ash in car lots, at works, per 100 pounds, are as follows: in bulk, $.90; in bags, $1.05; and in barrels, $1.35.

STARCH—Quotations on corn starch remain firm and unchanged at prevailing market prices. Globe pearl is quoted at $2.60 per 100 pounds; special paper starch at $2.70 per 100 pounds. All prices in bags, f.o.b., Chicago.

SULPHATE OF ALUMINA—Prices on sulphate of alumina remain firm and unchanged at prevailing market quotations. The commercial grades are quoted at $1.15; iron free at $1.30 per 100 pounds, in bags, car lot quantities, f.o.b., works.

SULPHUR—Quotations on sulphur remain firm at prevailing market prices. Annual contracts are quoted at $16 per long ton, f.o.b., mines. Spot and nearby car lots are offered at $19 per ton.

TALC—Prices on talc continue firm at prevailing market levels. Domestic talc is offered at from $15 to $18 per ton, Eastern mines. Imported talc is quoted at from $20 to $40 per ton, on dock.

John E. Alexander Re-elected

John E. Alexander, president of the Nekoosa-Edwards Paper Company, was reelected last week at its annual meeting as president of the Nekoosa-Port Edwards Building and Loan Association.

Market Quotations

Paper

(Delivered New York)

News, per ton—
Roll, contract....$50.00 @ —
Sheets .....58.00 @ —

Kraft—per cwt.—Delivered Zone A
No. 1 Northern....$4.75 @$5.25
Superstandard .... 4.12½ @ 4.62½
Northern Standard Wrapping ..... 4.00 @ —
Standard Wrapping 3.50 @ —

Tissues—Per Ream—Carlots
White No. 1..... .92½ @ —
White No. 1 M. G. .90 @ —
White No. 1½.... .67½ @ —
White No. 2..... .60 @ —
Anti-Tarnish M. G. .75 @ —
Colored ..... .87½ @ —
Kraft ..... .75 @ —
Manila ..... .60 @ —
Unbl. Toilet, 1 M.. 3.20 @ —
Bleached Toilet.... 5.26 @ —

Paper Towels—
Unbleached ..... 1.80 @ —
Bleached ..... 2.10 @ —

Manila—per cwt.—C. l. f. a.
No. 1 Jute..... 8.25 @ 9.75
No. 2 Jute..... 7.50 @ 9.00
No. 1 Manila Wrapping, 35 lb..... 5.00 @ —
No. 2 Manila Wrapping, 35 lb..... 4.75 @ —

Boards, per ton—
News .....27.50 @30.00
Chip .....27.50 @30.00
Sgl. Mla. Ll. Chip.42.50 @ —
Jute Lined Chip...42.50 @45.00
White Pat. Coated.55.00 @57.50
Kraft Linera.....42.50 @45.00
Binders Boards....71.00 @77.00

The following are representative of distributors' resale prices:

Rag Content Bonds and Ledgers—
White, Assorted Items,
Delivered in Zone 1:

	Bonds	Ledgers
100% Rag Ext. No. 1.	$39.10@$46.00	$40.25@$47.25
100% Rag	31.05@ 36.50	32.20@ 37.75
85% Rag	.....	29.90@ 35.00
75% Rag	23.60@ 27.75	24.75@ 29.00
65% Rag	.....	21.65@ 26.25
50% Rag	17.55@ 21.50	18.70@ 22.75
25% Rag	14.65@ 17.75	15.80@ 19.25

Colors at $1.00 cwt. extra.

Sulphite Bonds and Ledgers—
White, Assorted Items,
Delivered in Zone 1:

	Bonds	Ledgers
No. 1	$8.60@$10.50	$9.75@$12.00
No. 2	7.70@ 9.50	8.90@ 10.75
No. 3	6.85@ 8.25	8.00@ 9.75
No. 4	6.45@ 7.75	7.60@ 9.25

Colors $1.00 cwt. extra.

Free Sheet Book Papers—
White, Cased Paper,
Delivered in Zone 1:

No. 1 Glossy Coated	$10.80@$12.50
No. 2 Glossy Coated	9.25@ 10.75
No. 3 Glossy Coated	8.15@ 9.50
No. 4 Glossy Coated	7.65@ 9.00
No. 1 Antique (watermarked)	7.65@ 9.00
No. 2 Offset	7.00@ 8.25
A Grade E. F.	6.80@ 8.00
A Grade S. & S. C.	7.05@ 8.25
B Grade E. F.	6.25@ 7.50
B Grade S. & S. C.	6.50@ 7.75
C Grade E. F.	6.00@ 7.00
C Grade S. & S. C.	6.25@ 7.25
D Grade E. F.	5.70@ 6.75
D Grade S. & S. C.	5.95@ 7.00

Ivory & India at $.50 cwt. extra.

Mechanical Pulp

(On Dock, Atlantic Ports)

No. 1 Imported—
Moist .....25.00 @28.00
Dry .....25.00 @28.00

(Delivered)

No. 1 Domestic and Canadian .....29.00 @33.00

Chemical Pulp

(On Dock, Atlantic, Gulf and West Coast Ports)

Bleached Sulphite (Domestic and Foreign)—
Prime Bleached Sulphite ..... 2.25 @ 2.75
Prime Qualities—
Easy-Bleaching Sulphite ..... 1.90 @ 2.10
Strong Unbleached Sulphite ..... 1.80 @ 2.00

(On Dock, Atlantic Ports)

Kraft Bleached..... 2.50 @ 2.75
Kraft Light & Strong 1.60 @ 1.75
Kraft No. 1..... 1.45 @ 1.65
Kraft No. 2..... 1.40 @ 1.45

(F. o. b. Pulp Mill)

Kraft Domestic..... 1.25 @ 1.75

(Delivered)

Soda Bleached..... 2.55 @ —

Add 60 cents per short ton, dock charges for Albany; $2.50 for Lake Ports East and $3.50 for Lake Ports West of Mackinac Straits.

Domestic Rags

New Rags

(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—
New White, No. 1. 6.75 @ 7.00
Silesias No. 1..... 4.00 @ 4.25
New Unbleached... 6.50 @ 6.75
Blue Overall..... 4.75 @ 5.00
Fancy ..... 2.00 @ 2.15
Washables ..... 1.50 @ 1.60
Mixed Khaki Cuttings ..... 3.00 @ 3.25
O. D. Khaki Cuttings 4.00 @ 4.25

Old Rags

White, No. 1—
Repacked ..... 2.90 @ 3.15
Miscellaneous ..... 2.10 @ 2.25

White, No. 2—
Repacked ..... 1.50 @ 1.60
Miscellaneous .... 1.25 @ 1.40

Thirds and Blues—
Repacked ..... 1.30 @ 1.40
Miscellaneous ..... 1.15 @ 1.20

Roofing Rags—
No. 1..... 1.10 @ 1.15
No. 2..... .90 @ .95
No. 3 (bagging)... .60 @ .70
No. 4..... .65 @ .70
No. 5A ..... .65 @ .70

Foreign Rags

New Rags

New Dark Cuttings.. 2.25 @ 2.40
New Mixed Cuttings. 2.00 @ 2.20
New Light Silesias.. 5.50 @ 5.75
Light Flannelettes... 5.50 @ 5.75
New White Cuttings. 7.00 @ 7.50
New Light Oxford.. 4.00 @ 4.50
New Light Prints... 3.00 @ 3.25

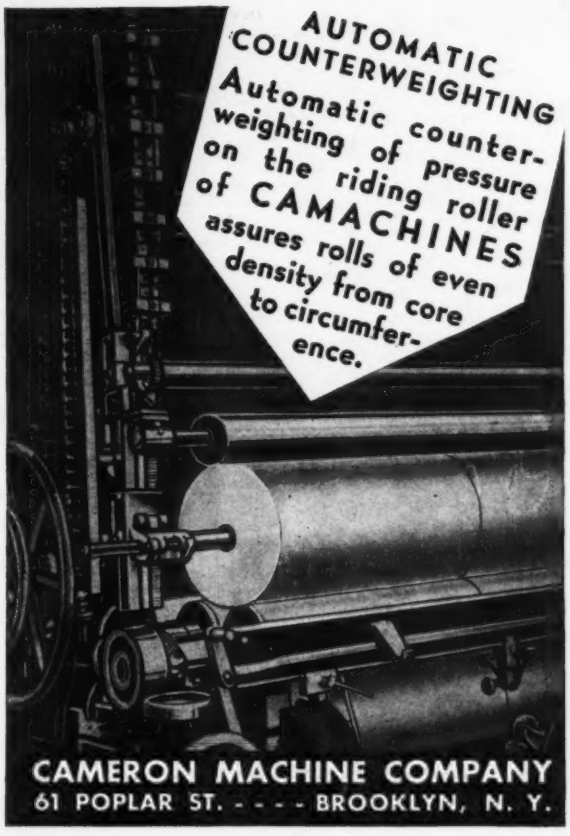
Old Rags

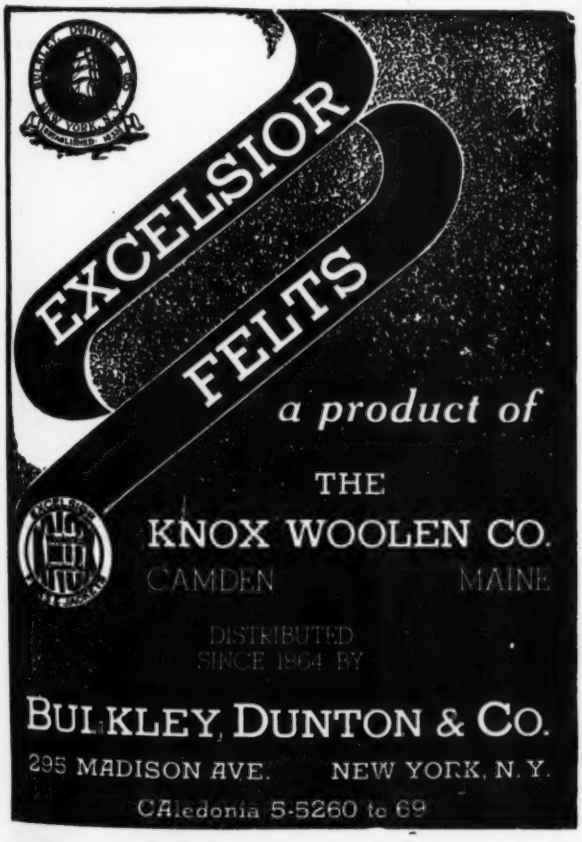
No. 1 White Linens. 7.50 @ 8.50
No. 2 White Linens. 6.50 @ 7.50
No. 3 White Linens. 4.50 @ —

WOOD PULP
AGENTS

PRICE & PIERCE, Ltd.,

60 EAST 42nd ST.
NEW YORK


AUTOMATIC
COUNTERWEIGHTING
Automatic counter-weighting of pressure on the riding roller of CAMACHINES assures rolls of even density from core to circumfer-ence.
CAMERON MACHINE COMPANY
61 POPLAR ST. - - - - BROOKLYN, N. Y.



THE DRAPER FELTS

All kinds and styles of Felts for all kinds and styles of Papers.

Write us about your Felt problems and let us help you reduce your Felt Costs—we will call anywhere at any time.

DRAPER BROS. COMPANY

CANTON, MASS.

Woolen manufacturers since 1856

No. 4 White Linens	2.25	@	3.25
No. 1 White Cotton	4.25	@	4.75
No. 2 White Cotton	3.25	@	3.75
No. 3 White Cotton	2.50	@	3.00
No. 4 White Cotton	1.90	@	2.20
Extra Light Prints	2.00	@	2.40
Ord. Light Prints	1.75	@	2.15
Med. Light Prints	1.55	@	1.95
Dutch Blue Cottons	2.25	@	2.50
French Blue Linens	3.00	@	—
Checks and Blues	2.00	@	—
Linsey Garments	1.90	@	2.00
Dark Cottons	1.50	@	1.60
Old Shopperies	1.30	@	1.45
New Shopperies	1.45	@	1.50
French Blues	2.25	@	2.50

Old Rope and Bagging

(Prices to Mill, f. o. b. N. Y.)

Gunny No. 1—			
Foreign	1.75	@	1.90
Domestic	1.70	@	1.80
Wool Tares, light	1.60	@	1.70
Wool Tares, heavy	1.80	@	1.90
Bright Bagging	1.60	@	1.70
Manila Rope—			
Foreign	2.60	@	2.75
Domestic	2.00	@	3.00
Jute Threads	2.75	@	3.00
Sisal Strings	1.50	@	1.60
Mixed Strings	.55	@	.60

Old Waste Papers

(F. o. b. New York)

Shavings—			
White Envelope Cuttings	2.25	@	2.40
Ordinary Hard White No. 1	1.90	@	2.00
Soft White No. 1	1.60	@	1.75
Soft White Extra	2.25	@	2.40
Flat Stock—			
Stitchless	.80	@	.85
Overissue Mag	.70	@	.75
Solid Flat Book	.55	@	.60
Crumbled No. 1	.40	@	.45
Ledger Stock White	1.15	@	1.20
Ledger Stock Colored	.60	@	.70
New B. B. Chips	.15	@	.20
Manila—			
New Env. Cut	1.40	@	1.50
New Cuttings	1.00	@	1.20
Old Kraft Machine— Compressed bales	.50	@	.60
News—			
No. 1 White News	1.25	@	1.30
Strictly Overissue	.40	@	.45
Strictly Folded	.35	@	.40
No. 1 Mixed Paper	.15	@	.20

Twines

(F. o. b. Mill)
(Soft Fiber)

Coarse Polished—			
India	.12¾	@	.14¼
White Hemp	.13¾	@	.15¼
Fine Polished—			
Fine India	.16	@	.18
Unpolished—			
Box	.09½	@	—
Paper Makers	.09½	@	.10½
Tube Rope	.10¼	@	.12½
Wall Paper	.10¼	@	.12½
Wrapping	—	@	—
Soft Fiber Rope	.12	@	.14
Cotton	.17	@	.20
(Hard Fiber)			
Medium Java	.11	@	.17
Mex. Sisal	.10	@	.16
Manila	.16	@	.23

PHILADELPHIA

Domestic Rags (New)

(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White, No. 1	.06	@	.06¼
New White, No. 2	.03½	@	.04
Light Silesias	.03½	@	.04
Silesias, No. 1	—	@	.04½
Black Silesias, soft	—	@	.03
New Unbleached	.05½	@	.06
Washable, No. 1	.01½	@	.01¾
Blue Overall	.04	@	.04½
Cottons—Acording to grades—			
Washable No. 2	.01	@	.01¼
New Blue	.01	@	.01¼
Fancy Percales	—	@	.02½
New Black Soft	.03	@	.03½
New Light Seconds	—	@	.04½
New Dark Seconds	.50	@	.75
Khaki Cuttings—			
No. 1 O. D.	.03	@	.03½
No. 2 Mixed	.02	@	.02½
Corduroy	—	@	.02
New Canvas	.05	@	.05½
New Black Mixed	.02½	@	.02¾

Domestic Rags (Old)

White No. 1—			
Repacked	3.00	@	3.25
Miscellaneous	2.50	@	2.75
Thirds and Blues—			
Miscellaneous	1.00	@	1.25
Repacked	1.50	@	1.75
Black Stockings (Export)	3.00	@	3.50
Roofing Stock—			
Foreign No. 1	—	@	1.20
Domestic No. 1	—	@	1.10
Domestic No. 2	—	@	.90
Roofing Bagging	—	@	.80

Bagging

(F. o. b. Phila.)

Gunny, No. 1—			
Foreign	1.75	@	2.00
Domestic	1.50	@	1.75
Manila Rope	—	@	3.50
Sisal Rope	1.50	@	1.75
Mixed Rope	.75	@	1.00
Scrap—			
No. 1	—	@	1.75
No. 2	1.00	@	1.25
Wool Tares, heavy	3.25	@	3.50
Mixed Strings	.75	@	1.00
No. 1 New Light Burlap	2.50	@	3.00
New Burlap Cuttings	1.75	@	2.00

Old Papers

(F. o. b. Phila.)

Shavings—			
No. 1 Hard White	2.25	@	2.30
No. 2 Hard White	1.90	@	2.00
No. 1 Soft White	1.75	@	1.80
No. 2 Soft White	1.30	@	1.40
No. 1 Mixed	.65	@	.75
Solid Ledger Stock	1.45	@	1.50
Ledger Stock, white	1.15	@	1.20
Ledger Stock, colored	.75	@	.80
No. 1 Books, heavy	.60	@	.75
Manila Cuttings	1.45	@	1.50
Print Manila	.40	@	.45
Container Manila	.35	@	.40
Kraft Paper	.75	@	.80
No. 1 Mixed Paper	.20	@	.25
Straw Board Chip	.25	@	.30
Binders Board Chip	.25	@	.30
Corrugated Board	.50	@	.55
Overissue News	.40	@	.45
Old Newspapers	.35	@	.40

BOSTON

Old Papers

(F. o. b. Boston)

Shavings—			
No. 1 Hard White	2.25	@	2.50
No. 1 Soft White	1.85	@	2.15
No. 2 Mixed	.75	@	.80
Solid Ledger Books	1.30	@	—
Overissue Ledger Stock	1.30	@	1.50
Mixed Ledgers	.85	@	.90
No. 1 Books, heavy	.65	@	.75
No. 1 Books, light	.65	@	.75
Crumpled Stitchless Book Stock	.55	@	.65
Manila Env. Cuttings	1.70	@	1.85
Manila Envelope Cuttings, extra quality	2.00	@	2.10
No. 1 Old Manila	.75	@	.85
No. 1 Old Manila	.80	@	.90
White Blank News	1.30	@	1.40
No. 1 Kraft	.80	@	.85
Mixed Papers	.15	@	—
Print Manila	.45	@	.55
Container Manilas	.27½	@	—
Old Newspapers	.25	@	.32½
Paper Wool Strings	.50	@	.65
Overissue News	.45	@	.50
Box Board Chips	.20	@	.25
Corrugated Boxes	.25	@	.30
Kraft corrugated boxes	.60	@	.65
Screening Wrappers	.40	@	.45

Bagging

(F. o. b. Boston)

Manila Rope—			
Foreign	2.65	@	2.75
Domestic	2.65	@	2.75
Sisal Rope	1.60	@	1.65
Mixed Rope	.40	@	.50
Transmission Rope	1.90	@	2.00
Soft Jute Rope	1.80	@	2.00
Jute Carpet Threads	.75	@	.90
Gunny Bagging—			
Foreign	1.75	@	1.85
Domestic	1.60	@	1.70
Bleachery Burlap	2.75	@	3.00
Scrap Burlap—			
Foreign	1.55	@	1.65
Domestic	1.40	@	1.50
Scrap Sisal	1.25	@	1.40
Scrap Sisal for Shredding	1.60	@	1.75
Wool Tares, Heavy	1.55	@	1.65
New Burlap Cuttings	2.00	@	2.25
Aust. Wool Pouches	2.50	@	2.75
Heavy baling bagging	1.75	@	1.85
Paper Mill Bagging	1.00	@	1.15
No. 2 Bagging	.50	@	.70

Domestic Rags (New)

(F. o. b. Boston)

Shirt Cuttings—			
New Light Prints	.03¼	@	.03½
New White No. 1	.06¾	@	.07
New Light Flannelettes	.04¾	@	—
Silesias No. 1	.04¾	@	—
New Black Silesias	.03¾	@	.04
Soft Unbleached	6.50	@	7.00
Blue Cheviots	.05	@	.05¼
Fancy	.03	@	.03¼
Washable	.02¾	@	.03
Cottons—According to grades—			
Blue Overalls	.04¾	@	.05
New Black, soft	.03¾	@	.04
Khaki Cuttings	.03	@	.03½
O. D. Khaki	.04	@	—
Corduroy	.02¾	@	.03
New Canvas	.06¾	@	.07¼
B. V. D. Cuttings	.06¾	@	—

Domestic Rags (Old)

(F. o. b. Boston)

Canvas	.04½	@	—
White No. 1—			
Repacked	—	@	2.75
Miscellaneous	2.50	@	2.75
White No. 2—			
Repacked	1.90	@	2.00
Miscellaneous	2.00	@	2.25
Twos and Blues	1.75	@	2.00
Old Blue Overalls	1.50	@	—
Thirds and Blues—			
Repacked	1.37½	@	1.75
Miscellaneous	1.25	@	1.62½
Black Stockings	3.90	@	4.00
Roofing Stock—			
No. 1	1.00	@	1.10
No. 2	.75	@	.85
No. 3	.65	@	.70

Foreign Rags

(F. o. b. Boston)

Dark Cottons	1.00	@	1.10
Dutch Blues	2.65	@	2.75
New Checks and Blues	2.85	@	3.00
Old Fustians	2.25	@	2.50
Old Linsey Garments	2.20	@	2.25
New Silesias	4.50	@	4.75

CHICAGO

Old Papers

(F. o. b. Chicago)

Shavings—			
No. 1 White Envelope Cuttings	1.80	@	1.90
No. 1 Hard White	1.70	@	1.80
No. 1 Soft White	1.50	@	—
Ledger & Writings	.75	@	.80
Solid Books	.45	@	.50
Blanks	.90	@	—
Krafts	.45	@	.50
New Kraft Cuts	1.10	@	—
Manila Env. Cuts	Nominal		
Ex. No. 1 Manila	Nominal		
Print Manila	Nominal		
Overissue News	.35	@	—
Old Newspapers—			
No. 1 Folded News	.25	@	.30
No. 1 Mixed Paper	.15	@	.20
Roofing Stocks—			
No. 1	1.00	@	1.05
No. 2	.85	@	—

TORONTO

Paper

Bonds

Direct mill shipment in two-ton lots

No. 1 White	$35.50	@	—
No. 1 Tints	36.50	@	—
No. 2 White	25.50	@	—
No. 2 Tints	26.50	@	—
No. 2 Golden Rod	27.50	@	—
No. 3 White	21.00	@	—
No. 4 White	15.00	@	—
No. 4 Tints	16.00	@	—
No. 4 Golden Rod	17.00	@	—

Direct mill shipment in three-ton lots

No. 5 White	$10.50	@	—
No. 5 Tints	11.50	@	—
No. 5 Golden Rod	12.00	@	—
No. 6 White	9.00	@	—
No. 6 Tints	9.50	@	—
No. 6 Golden Rod	11.00	@	—
No. 7 White	8.00	@	—
No. 7 Tints	8.50	@	—
No. 7 Golden Rod	10.00	@	—
Book—			
No. 1 M. F.	$7.00	@	—
No. 2 M. F.	6.50	@	—
No. 3 M. F.	5.25	@	—
No. 1 S. C.	7.25	@	—
No. 2 S. C.	6.75	@	—
No. 3 S. C.	5.75	@	—

Coated Book & Litho

Ton Lots (resale)

No. 1	$12.00	@	—
No. 2	10.25	@	—
No. 3	8.90	@	—
Coated tinted	13.00	@	—
Wrapping—delivered—			
Rag Brown	4.85	@	5.25
White Wrap	4.00	@	—
"B" Manila	4.90	@	6.15
No. 1 Manila	5.50	@	6.90
Fiber	5.50	@	6.90
Kraft No. 2	5.50	@	6.90

(F. o. b. Cars, Toronto)

News per ton—			
Rolls (contract)	46.00	@	—
Sheets	54.00	@	—

Pulp

Ground wood	29.50	@	—
Bleached sulphite	54.00	@	—
Unbleached sulphite	44.00	@	—
Kraft	50.00	@	—
Soda	51.00	@	—

Old Waste Paper

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	2.25	@	—
Soft White	2.15	@	—
White Blk. News	1.25	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	.70	@	—
Light and Crumpled Book Stock	.60	@	—
Ledgers and Writings	1.00	@	—
Manilas—			
New Manila Cut	1.35	@	—
Printed Manilas	.45	@	—
Kraft	.95	@	—
News and Scrap—			
Strictly Overissue	.50	@	—
Strictly Folded	.45	@	—
No. 1 Mixed Paper	.30	@	—

Domestic Rags

(Price to Mills, f. o. b. Toronto)

No. 1 White Shirt Cuttings	.06½	@	.06¾
Fancy Shirt Cuttings	.02¼	@	.02½